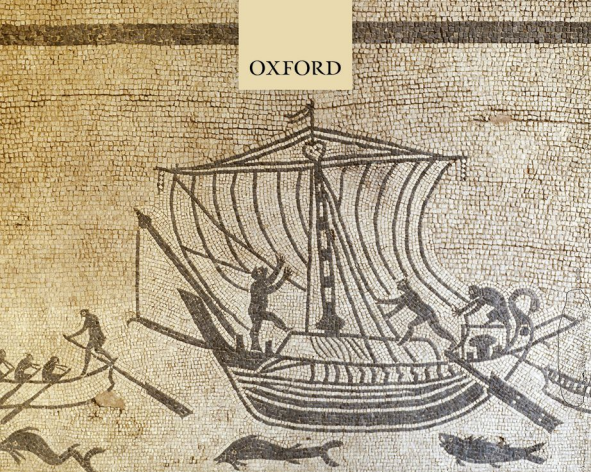
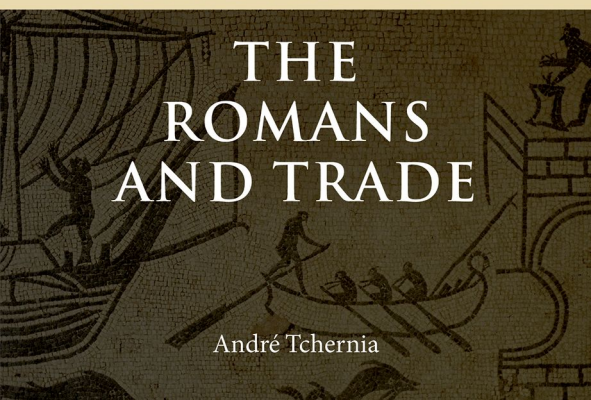


A mosaic illustration depicting a large Roman sailing ship with a single mast and a large square sail. Several figures are on board, including one standing near the mast. To the left, a rowing boat with three oarsmen is shown. To the right, another rowing boat is visible. In the foreground, two fish are depicted swimming. The background is a textured mosaic pattern.

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A mosaic illustration depicting a Roman sailing ship and rowing boats. The ship has a large square sail and several figures on board. Rowing boats with oarsmen are visible in the foreground and background. The scene is set against a textured mosaic background.

THE ROMANS AND TRADE

André Tchernia

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The Romans and Trade

ANDRÉ TCHERNIA

Translated by James Grieve
(with Elizabeth Minchin)

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Preface to the First Edition

Part I of this book, originally meant as an introduction to a collection of essays and articles, *scripta varia*, on trade, has outgrown that intention. The fact is that many of the articles in Part II may be considered as lengthy footnotes to Part I, linked to it by cross references. The same themes are treated in both parts: mentalities and behaviours, the provisioning of Rome, trade with the East, merchants from Baetica, side effects of the food supply system (*annona*), wine in Gaul before Caesar, and discussion of the idea of competition, to quote them in the order in which the articles appear in Part II. No attempt has been made to avoid repetitions.

Part I focuses on the West and the first two centuries of the Empire; but, even with this restricted scope, it does not pretend to cover the entirety of the subject. It is more in the nature of an essay in which I have tried to bring together ideas which I have partially expounded in previous years. I take as my starting point the evidence of the great quantities and equally great value of merchandise transported often over long distances at the time of the Roman Empire. This evidence does not necessarily lead to any conclusion that the Romans had organizations or means comparable to those available in more modern times or in our own period. These pages try to show that the distribution of goods and the means this required differ from what obtained before and after.

I express here my thanks to those who kindly read some of the chapters in their original form and commented on them: Michel Bonifay, Philippe Borgard, Marie-Brigitte Carre, Federico De Romanis, Lucia Rossi, Catherine Virlouvet. I owe a greater debt of gratitude to Fausto Zevi, Jean Andreau, and Jean Bonamour, who read Part I in its entirety and were unstinting in their encouragement and advice. The name of Dick Whittaker would have had pride of place on this list, had not his death deprived his friends of the liveliest, most interesting and communicative of fellow scholars.

I am especially grateful to those without whose friendship and hard work this book would not have been published. Jean-Pierre Brun, the Director of the Centre Jean Bérard, agreed to the project as soon as I mentioned it to him; he then took a very personal interest in it, giving me constant encouragement to keep working on it and bring it to fruition without interruption. Armelle Guilcher drew up the Bibliography and read each successive print of the text, doing the real spadework for eventual publication. Mireille Pagni either designed or perfected the main graphs and maps. Marie-France Giacobbi-Lequément checked the second proofs in their entirety; my text benefited from

her close attention to detail. I am glad to thank them all; and I assure them that, if there are oversights in the text, I take full responsibility for them.

As I reach the end of this work, I am mindful, too, of the members of my family and I am full of affection and gratitude for each of them for having supported, sustained, and put up with me in their different ways, not just during the writing of it but also over the many years that led up to it.

Aix-en-Provence

December 2010

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Every effort has been made to contact the translator(s) of these chapters. If contacted, the publisher will be pleased to rectify any omissions at the earliest opportunity.

Contents

List of Figures

xiii

Part I. The Romans and Trade

Introduction	3
1. Landowners and Traders	10
Products of the Estate: A Broad Connotation	10
The Landowner's Range of Activities	12
The Separation between Production and Long-Distance Trading	13
Senators Engaged in the Export Business?	16
Ideological Problems	21
The Secrecy Theory	23
Financing Trade and its Channels	27
Conclusion	36
2. Traders' Fortunes	38
Seneca and Cornelius Senecio	38
Those who Are Trying to Make their Fortune Honourably, via Trade	39
Between Puteoli and the Red Sea	42
Painted Inscriptions on the Amphorae from Baetica	51
Urban Fortunes	65
Diversity and Specificity	67
3. The Matter of the Market	72
The Enormous Conglomeration of Interdependent Markets:	
A Red Herring	72
Divergent Opinions	78
Archaeological Evidence and its Interpretation	79
Modes of Transport	89
The Influence of Transaction Costs: Growing Inequality	93
Paradoxes	95
4. The Role of the State	97
Limits to State Participation	97
Supplying the Army	98
Side Effects of Food-Supply Policy	103
Demography	111
Conclusion	113
5. Meeting Needs	115

Part II. *Scripta varia*

6. Dreams of Wealth, Loans, and Seaborne Trade	131
7. The Sale of Wine	140
The Point of View of the Producer	140
The Point of View of the Buyer	147
8. The <i>plebiscitum</i> Claudianum	150
The Prohibition on Owning Seagoing Vessels with a Capacity Greater than 300 Amphorae	152
A Tonnage Deemed Sufficient for Transporting one's own Produce	155
<i>Quaestus</i> and the Ordering of the Parts of the Preamble	155
Evolution of the <i>plebiscitum</i> Claudianum: <i>In Verrem</i> and the <i>lex Iulia de repetundis</i>	156
The Impossibility of Tendering for Tax Grain Contracts	159
The Senators' Anger	161
<i>Quaestus omnis patribus indecorus</i> : The Third Century	162
The Meanings of <i>quaestus</i>	165
Talk and Actions	168
<i>Per incerta maris</i>	170
Recapitulation	172
9. The Crisis of AD 33	174
Origins and Development	174
Land Prices and Interest Rates	176
The <i>senatus consultum</i> : Tacitus and Suetonius	177
The Foreseeable Consequences and the Probable Objectives of the <i>senatus consultum</i>	179
What Lessons are to be Drawn from the Crisis of AD 33?	183
10. Staple Provisions for Rome: Problems of Quantification	188
Grain	188
Oil	195
Wine	196
Conclusion	196
11. Food Supplies for Rome: Coping with Geographical Constraints	201
The Roman Countryside and Long-Distance Supplies	201
The Tiber	202
The Seaports	206
12. Claudius' Edict and Ships of 10,000 <i>modii</i>	211
13. The Dromedary of the Peticii and Trade with the East	220
14. Winds and Coins: Trade between the Roman Empire and India	229
Using the Monsoon	229
Massive Outflow of Money?	238

15. D. Caecilius Hospitalis and M. Iulius Hermesianus (<i>CIL</i> VI. 1625b and 20742)	249
D. Caecilius Hospitalis	249
Inscriptions on Amphorae from Monte Testaccio and on Stone	250
M. Iulius Hermesianus in Rome	252
Conclusion	252
16. Delivery of Oil from Baetica to the <i>limes</i> in Germania: Wierschowski versus Remesal	255
17. Warehousing and Complementary Cargoes on the Alexandria Grain Run	265
The Murecine Tablets	265
The Grain from Alexandria and the Lentils of C. Novius Eunus, a Trader at Puteoli	266
Menelaus, a Carian Ship's Master, and Baetican Amphorae in the Eastern Mediterranean	269
The Low Price of Cretan Wine in Rome	273
Conclusion	275
18. Wine Exporting and the Exception of Gaul	277
Transformation of Distribution Maps for the Early Second Century BC	277
The Gauls and Wine during the Late La Tène Period	281
Between Cato and Caesar, from Gold to Slaves	286
Effects on Italian Wine-Growing Regions: Expansion and Colour	292
Creation of a Specialized Merchandise	295
19. The Economic Crisis in Imperial Italy and Competition from the Provinces	297
Italian Terra Sigillata Pottery	299
Amphorae and Villas	301
<i>References</i>	317
<i>Index of Sources</i>	365
<i>Geographical Index</i>	372
<i>Subject Index</i>	378

List of Figures

3.1. Distribution map of the <i>LQS</i> stamp on amphorae from Baetica	84
3.2. Comparative distribution map of stamps of C. Antonius Quietus and C. Laecanius Bassus	87
5.1. Mediterranean wrecks by centuries (after Parker)	118
5.2. Western Mediterranean wrecks by half-centuries (after Parker)	118
5.3. Mediterranean wrecks by half-centuries (after Parker)	119
5.4. Mediterranean wrecks by half-centuries (after Wilson)	119
13.1. Bronze statuette of Hercules	222
13.2. Latin inscription of Peticius at Wadi Hammamat	224
13.3. Greek inscription of Peticius at Wadi Hammamat	225
13.4. Bas-relief at L'Aquila	226
14.1. Hoard of <i>denarii</i> and Mediterranean amphorae in India	245
18.1. Distribution map of the amphora stamps of <i>Trebios Loisios</i>	279
18.2. Distribution map of Greco-Italic amphorae in Gaul. (Poux 2004a: fig. 114)	280
18.3. The ditch of Verbe-Incarné in Lyons	281
18.4. Woman's skull and horse carcass in the ditch at Verbe-Incarné	282
18.5. Corent: deposit of fragments of amphorae and bones	284
18.6. Corent: vats for libations	285
18.7. Distribution map of all Greco-Italic and Dr.1 amphorae in Gaul	290
18.8. Fetters found in the bed of the Saône near Chalon	291
19.1. Ostia, all amphorae	307
19.2. Rome or Ostia; all amphorae	308
19.3. Rome; wine amphorae only	309

Part I

The Romans and Trade

Introduction

Trade is an abomination: in violation of a decree by a wise god who wanted lands to be separated by water, it sends out impious ships across the seas.¹ Neither men nor trees were born to live on water; it is unnatural to make them do this, just as unnatural as it is to shun the light of day and move about under the ground in search of metals.² It is sheer greed that makes rash men run the risk of digging tunnels and braving winds and gales. They would be happier and would live longer if they acted in conformity with their natural state of self-sufficiency, requiring little to live by and being content only with what is necessary.

The sea is a source of corruption,³ harbours are places of perdition, and seaports are exposed to grave dangers. For this, commerce and traders are to blame. Plato saw access to the sea as being the source of the profit motive, which he banned from his ideal city, austere and immutable. Aristotle said that some people fear the overpopulation of ports and the presence of foreigners, the strangers brought up under different laws. These consequences flow from commerce, which a host of traders pursue on the seas. Cicero, too, took the view that the speech and manners of foreigners that were imported along with goods were in danger of corrupting the national tradition; but he also deplored the ready availability of luxury items, the attraction of the open sea with the dreams and distant yearnings it puts into the hearts of men, the liking for trade and navigation taking precedence over a care for agriculture and preparation for war.⁴ Maritime cities, with their empire-building and economies based on trade, eventually come to grief: look at Athens. During the third Punic War, this example was used by the consul Censorinus to try to persuade the Carthaginians that, when the Romans demanded they abandon their city and build another one farther away from the sea, they were concerned only for the good of Carthage itself (this being the final ploy in a pretence of negotiation marked as never before by Roman dishonesty, treachery, and cynicism). If the Carthaginians were to do this, they would enjoy all the

¹ Horace, *Carm.* I. 3, 21–4.

² Domergue (2008), 28–30.

³ Cf. the title of Horden and Purcell's well-known work, *The Corrupting Sea* (2000).

⁴ Plato, *Lg.* IV. 704–5; Aristotle, *Pol.* VII. 6,1 (1326^b); Cicero, *Rep.* II. 5–9; *Agr.* II. 95.

security accruing from agriculture and its untroubled labours, instead of relying on the sea, which is the site of hasty action (*ταχὺεργία*) and of riskiness.⁵ Philostratus gives another example of the same kind in one of the arguments used by Apollonius of Tyana to persuade a young Spartan aristocrat to give up maritime trading with Carthage and Sicily: Sparta itself, when it became interested in seafaring instead of sticking to dry land, ran to ruination and decadence.⁶

My two previous paragraphs rehearse literary themes drawn from a common fund of myth and traditionalism. These themes originate in the idea of the golden age, when bounteous Nature supplied everything required by virtuous men, and in the principle that relying on others for one's subsistence makes one dependent on them and so alienates one's freedom.⁷ In the minds of the Romans, these themes are linked to the mythic image of a past when, in Romulus' days, two *jugera* of land (half a hectare) per person were deemed sufficient, when the messenger bringing to Cincinnatus the news of his appointment as dictator found him working, all sweaty and dusty, in his field of four *jugera* at the Vatican, and when, as late as the early third century BC, Manius Curius Dentatus stated that anyone who was not satisfied with seven *jugera* was a bad citizen.⁸ These are recurrent themes in diatribes, tirelessly and often elegantly rehearsed not just by the poets⁹ but also by the politicians, the agricultural writers, and the philosophers. Seneca uses the theme of self-sufficiency not as mere rhetorical ornamentation, but as an argument demonstrating that luxury is not a genuine good: 'What need of commerce? ... The foods which nature has placed in every region lie all about us, but men, just as if blind, pass these by and roam through every region, they cross the seas and at great cost excite their hunger when at little cost they might allay it' (trans. J. W. Basore).¹⁰ People entertained such ideas, far removed though they were from actual practice, rather as nowadays everybody complains of the wastefulness of consumer societies. It was known, however, that they were long since of no practical application.

Any town needs to be well supplied; and, in the pre-industrial era, no large city could be supplied except via the sea or a navigable river.¹¹ Against the risks from closeness to the sea, Aristotle sets the advantages: 'Now it is not difficult to see that ... it is advantageous in respect of both security and supply of necessary commodities that the city and its territory should have access to the sea' (trans. H. Rackham, adapted).¹² Cicero follows in Aristotle's footsteps;

⁵ Appian, VIII (*Lib.*), 86–9.

⁶ Philostratus, VA IV. 32.

⁷ Oltramare (1926: 49–54).

⁸ Pliny, XVIII. 7, 18; Livy, III. 26, 9–10.

⁹ e.g., Propertius, I. 17, 13 ff.; II. 7, 26–38.

¹⁰ Seneca, *Helv.* X. 5. See many more examples in Giacchero (1980: 1097–1113).

¹¹ Grantham (1997) qualifies this principle somewhat for wheat supply to towns in northern Europe but not for Mediterranean towns.

¹² Aristotle, *Pol.* VII. 4 (1327^a).

and, after having developed his own version of the drawbacks of port cities, he gives a sentence to this substantial advantage: the possibility of bringing in by sea products from all peoples and of exporting wherever one wishes those from one's own territory. This was why Romulus, no doubt foreseeing that Rome would become a super-city, established it ideally on the Tiber, where it could receive both products arriving by sea and those brought down from the hinterland.¹³

During the Empire, this super-city, the like of which the Mediterranean world would never see again until the twentieth century, is often estimated to have had a million inhabitants.¹⁴ Urban centres of comparable magnitude did not arise in Western Europe until the end of the eighteenth century (London) and the middle of the nineteenth century (Paris). This comparison, however, is misleading, in that London and Paris stand at the centre of broad and very fertile sedimentary basins; and this could not be said of either the fertility or, especially, the extent of the Roman *campagna*.¹⁵ The greater part of the goods that provided the wealth of the capital of the Roman Empire and made for its upkeep had to come in by sea. Such a statement necessarily implies that seaborne trade developed on a scale out of all proportion with what the Mediterranean had seen previously and which would probably not be surpassed in pre-industrial times. The moral diatribes counterpointed a rapid increase in commercial shipping starting in the third century BC, as is attested by the numbers of wrecks counted.¹⁶

Alongside the diatribes, the first century AD begins to see signs of wonderment at the networks that, thanks to Rome, now link different parts of the world, and at the number of vessels sailing into its harbours. In Varro, Columella, and Tacitus (through the words of Tiberius), the ideal of self-sufficiency can still be seen behind passages deploring the fact that Italy's provisioning requires importation of wheat, wine, and oil, that the country 'depends on external supplies and that the life of the Roman nation is tossed day after day at the uncertain mercy of wave and wind' (trans. W. D. Hooper; rev. H. B. Ash).¹⁷ Pliny, however, though he still speaks of seas 'desecrated by traders',¹⁸ says at the start of the same book: 'For who would not admit that, now that the world has been unified through the majesty of the Roman

¹³ Aristotle, *Pol.* VII. 6, 2 (1327^a); Cicero, *Rep.* II. 10.

¹⁴ The population of Istanbul had probably reached 600,000 by the seventeenth and eighteenth centuries (Özveren 2003: n. 5) and by 1900 was close to one million; in the western Mediterranean, the largest city in the late nineteenth century was Naples, with 600,000 inhabitants.

¹⁵ See Ch. 11; see also Morley (1996: 63–5 and *passim*).

¹⁶ Parker (1992); van der Mersch (2001); Cibecchini (2008).

¹⁷ Varro, *R.*, II, *praef.*, 3; Columella, I, *praef.*, 20; Tacitus, *Ann.* III. 54.

¹⁸ Pliny, XIV. 52: *non maria plus temerata conferre mercatori, non in Rubrum litus Indicumve merces petitas quam sedulum ruris larem.*

Empire, life has been advanced by the interchange of commodities and by partnership in the blessings of peace, and that even things that had previously lain concealed have all now been established in general use?’ (trans. R. Gummere, adapted).¹⁹ There is nothing very surprising in the contrast between Pliny feeling admiration for this mode of globalization and yet having recourse to a literary commonplace. Manilius, during the reign of Tiberius, had already given traders credit for linking so many unknown lands through commerce.²⁰ Seneca, who had railed against seeking precious objects from far away, quotes a passage from the *Georgics* to explain that the different fruits of the earth have been distributed among different regions ‘in order that human beings may be constrained to traffic among themselves, each seeking something from his neighbour in his turn’ (trans. R. Gummere).²¹ This is worlds away from a dichotomy that could be disbelieved in only on pain of sacrilege.

Rome, like all great capital cities, was where everything was to be found, where products were compared and judged.²² Its port, Ostia, was founded as the welcoming point for riches and provisions arriving from the world over.²³ Lastly, in 143 or 144, Aelius Aristides countered the indignation expressed by Varro, Tiberius, and Columella on the day when he delivered, in Greek, the eulogy of Rome in the Athenaeum built some time before by Hadrian: it is the glory of Rome that it has as its farmlands ‘Egypt, Sicily, and all of Africa which is cultivated’; and it is another glory, of course, that the city receives the most precious goods from the whole world, from India, from Arabia Felix, from Babylon, and that in your port ‘the arrivals and departures of the ships never stop, so that one would express admiration not only for the harbour, but even for the sea’, that it can carry so many vessels (trans. C. Behr, adapted).²⁴ A similar fascination can be read from the anathemas of *Revelations*: Rome’s downfall and destruction are brought about by the insolence of traders whose fortune it has made and who have become the great of the earth.²⁵ Ten lines of the text give an astonishing inventory of goods imported into Rome: luxury goods first, gold, silver, precious stones, pearls, several kinds of fine fabrics, including silk, and their most expensive dyes, thuya wood, objects worked in ivory and precious woods, but also in bronze, iron, and marble, various

¹⁹ Pliny, XIV. 2. On this passage, see Nicolet (1988), 209–10.

²⁰ Manilius, *Astr.* 4, 169–70: *orbisque orbi bona vendere possel/totque per ignotas commercia jungere terras.*

²¹ Seneca, *Ep.* 87, 20–1 (cf. Vergil, *G. I.* 53–8). The same idea is in Philo, *Leg. ad Gaium*, 47.

²² Pliny, XI. 240: *ubi omnium gentium bona comminus judicantur*; Florus, I. 4, 2; Aelius Aristides, XXVI. 11; Galen, XIV. 24 (Kühn).

²³ Florus, I. 1, 4: *ut totius mundi opes et commeatus illo velut maritimo urbis hospitio recipereantur.*

²⁴ Aelius Aristides, XXVI. 12–13.

²⁵ [οἱ] ἔμποροί σου ἦσαν οἱ μεγιστάνες τῆς γῆς (*Revelations*, 18:23).

perfumes and aromatics, and finally the indispensables of life²⁶—namely, wine, oil, *similago*,²⁷ wheat, livestock and horses, and of course, bringing up the rear, slaves.²⁸ Two missing items are surprising: pepper, as luxury; salt fish, as daily necessity. But the principle of an inventory combining the most exotic things and the most everyday is one to note.

No serious scholar doubts the scale of commercial activity under the Roman Empire. Anyone who claims that Moses Finley restricted this activity to luxury goods has not read either what he says about Rome ('a fabulous consumer of wine'²⁹) or what he says about Lyons,³⁰ or the more frequently quoted passage in which he stresses that 'the intrusion of genuine market (commercial) trade, on a considerable scale and over very great distances, into the Graeco-Roman world had a feedback effect on peasant markets and the rest to such a degree as to render the primitive models all but useless'.³¹ Several authors have calculated the numbers of ships and investments required to keep Rome supplied.³² My own estimates³³ lead me to the conclusion that the whole eighteenth-century French fleet would not have sufficed.

In recent years, two essential pieces of evidence have vastly increased the sums entailed in the trade in luxury goods, at any rate those from the Orient, such as precious stones, pearls, silk, ivory, and perfumes, which come foremost in the list in *Revelations*, and to which must be added pepper.

The verso of the Vienna papyrus G 40822 (SB XVIII 13167), first published in 1983 and the subject of several studies,³⁴ gives the tail end of an estimate of the prices of goods conveyed by a vessel named *Hermapollon*. It had come from India, with a cargo of Gangetic nard, ivory, and other items detailed in

²⁶ I borrow the distinction between the superfluous and the indispensables of life from Polybius (IV. 38, 4), who actually includes in the latter category small livestock and slaves. The distinction made between *necessaria* and *supervacua* is a standard one (e.g. Seneca, *Ep.* 110, 11). The list in *Revelations* coincides with and extends the list of goods that merchants from the East showed, to no avail, to Verres to prove they were not soldiers of Sertorius: purple, incense, perfumes, linen cloths, precious stones, pearls, wines from Greece, Asian slaves (Cicero, *Verr.* 2. v.146).

²⁷ A refined flour made from hard wheat, on which see De Romanis (2003b) and p. 199.

²⁸ *Revelations*, 18:12–13.

²⁹ Finley (1985: 238, n. 24 = 1975b: 179, n. 24).

³⁰ He quotes Rostovtzeff ('Lyons was not only the great clearing-house for the commerce in corn, wine, oil, and lumber; she was also one of the largest centres in the Empire for the manufacture and distribution of most of the articles consumed by Gaul, Germany and Britain'); and he adds: 'This may be excessively exuberant, but there can be no dispute about the volume and importance of the trade passing through such centres' (1985: 59 = 1975b: 74). It should be noted that this passage from Rostovtzeff is the very one chosen by Morley (2007: 3) as an example of modernism.

³¹ Finley (1987: 37 = 1975a). For various people's inability to understand and caricatures intended to add to the controversy, see Bang (1998) and Saller (2002).

³² Hopkins (1983); Rathbone (2003).

³³ See pp. 196–7.

³⁴ Latterly by De Romanis (1996a: 192–200; 1998); Rathbone (2000); and especially Morelli (2011). For earlier literature on the matter, see p. 238, n. 33.

the missing columns, among which pepper must have figured prominently. The cargo altogether (or three-quarters of it, in the view of Dominic Rathbone, now confirmed by Federico Morelli) was worth 1,154 talents 2,852 drachmas silver, equal to nearly 7 million sesterces. This is a fortune equivalent, say, to that of a senator who was not of the richest class but who was well above the minimum property qualification of one million sesterces.

So this figure is an impressive one, as has several times been pointed out. But the figure derived from an Aramaic inscription from Palmyra, recently reinterpreted by De Romanis, reaches incredible proportions. Found inside a funerary tower, dating from later than the middle of the first century AD and probably before the middle of the second century, from the second line onward it gives the figures of a series of additions of sums of money, expressed first in drachmas, then in tetradrachms, then in talents. The final sum, 3,728 talents, 76 minas, 5 tetradrachms, 1 drachma, and 2 obols, amounts to almost 90 million sesterces. According to the first line, this sum represents the 25 per cent customs duty levied over a month. De Romanis leaves open the question of whether this sum represents the dutiable value of the merchandise or the total duty paid. If it is the latter, which references to the local lexicon make more plausible, then the value of goods arriving by caravan at Palmyra during the month in question would reach 350 million sesterces. This amounts to a good third of the budget of the Roman state, the equivalent of the exceptional fortunes of the first or second centuries AD, such as Seneca's, for instance. Yet it must be accepted that there is an internal consistency in the additions and conversions that guarantee the accuracy of this interpretation.³⁵

Such sums of money, even the lower of the two, are astounding. We must assume that what we are dealing with here is an exception, a record amount for the tax-farmer of the customs at Palmyra, and that this is the reason why it was engraved in his tomb. Despite this, the figures do make some sense. According to Pliny the Elder, imports from the East cost the Roman Empire 100 million sesterces a year, a sum that has inspired much discussion. Its reliability depends on the source, probably customs data, from which Pliny took his information, and on whether he based it on prices at Alexandria or on the true purchase prices in India, which would have been difficult to ascertain outside the world of the traders themselves and which were in any case much lower. In the fourteenth century, traders could buy a kilo of pepper for 1–2 grammes of silver in India; but in Alexandria it was worth 10–14 grammes of silver.³⁶ Whatever the case, Pliny's figure is on the same scale as those

³⁵ De Romanis (2004, 2006).

³⁶ See Braudel (1979: 357), who found this information in a book by W. Abel citing H. H. Mauruschat. I came across the reference to Braudel in a seminar given by Dominic Rathbone. In the light of these amounts, Braudel wonders whether 'the economic impact of luxury trade is not too easily underestimated'.

mentioned in the Vienna papyrus and the Palmyra inscription.³⁷ The bulk of such goods ended up in Rome, contributing to a volume of trade that of necessity required the input of substantial capital. I shall come back to this later.

So let us not be too sceptical about the impression of the gigantic scale that we get from the calculations of tonnages and wealth required for the daily supply of food to Rome and for importing luxury goods. However, it should be remembered that all the examples I have given up till now relate only to consumption in the capital of the Empire and have nothing to say about what was happening elsewhere. Whatever is said about Rome is not said about the Empire or about the wider Roman economy.

In addition, the sheer amounts mobilized or paid over are not enough for us to define the nature of a commercial system or to state that it is similar to some other. Size is not everything. In recent years, the fashion for placing the Roman economy on a comparative scale devised for Europe between the fourteenth and the nineteenth centuries has obscured the fact that peculiar to it were many features that it would be most interesting to spell out and that cast doubt on any attempt to fit it into some exact slot of European economic development. All I propose to do here is ask three questions. Who controlled trade? To what extent did it flow through the whole of the Empire? What were the factors that set a commercial flow in motion?

³⁷ See also pp. 238–42.

Landowners and Traders

To be a landowner is eminently respectable; to engage in trade is not. Generally speaking, that antithesis underpins the mindset of those who have attempted to describe the social organization of production and supply in the Roman world. Here I wish to draw other distinctions that can have the effect of defining procedures and roles somewhat differently.

PRODUCTS OF THE ESTATE: A BROAD CONNOTATION

Antiquity defined traders solely as men who bought and sold. Selling what one produces is not trade, at least not in the case of landowners. This has often been pointed out,¹ though some have had difficulty in grasping this ‘simple and strict’ distinction, as described by Andrea Giardina, who has traced its origin back to Plato.² Matters of social propriety and of the respectability or lack of it of engaging in trade are irrelevant if one is selling what is produced by one’s own estate.

These words must be taken in their broadest connotation. The most explicit statement comes from Varro’s *De re rustica*. At the beginning of the treatise, Varro engages in a long discussion of whether animal husbandry is relevant or not to a book on agriculture. His own view is that it is not. He eventually resorts to comparisons: if the breeding of livestock is included, then why not include also the exploitation of clay-pits, which was held by the *Sasernae* to be part of agriculture, or the quarrying of sand or stone, or even mining? Obviously, these activities should be engaged in and profit made from them; but he cannot see them as having anything to do with agriculture, any more than inns have to do with it, though *tabernae deversoriae* should be built by anyone who has the good fortune to live by a busy road.³ A little earlier in his

¹ With particular clarity by Whittaker (1985: 57–8).

² Giardina (2002a: 333 (Giardina and Gurevič 1994: 29)); Plato, *Sph.* 223d.

³ *Rust.* I. 2, 22–3. See also Vitruvius, VI. 5, 2.

text, Agrius had referred to the workshops of weavers. To us, it appears obvious that none of this has to do with agriculture; but the Roman writer on husbandry was aiming at the enlightenment of landowners who were exploiting all their best resources; and he makes the point that he is contributing to a single aspect of their operations. The concept of 'products of an estate' covers the whole range of economic activities carried out there. To the modern mind, the honourable landed proprietor who sets up inns is getting into the demeaning business of being a *tabernarius*, an innkeeper. In fact, though, that is irrelevant; the question did not arise, and no one would call him a *tabernarius*, especially since, through the inn, he could sell his wine and probably his wheat and vegetables too.⁴

In working clay pits we have the best-documented example of the broad meaning of 'products from an estate'. A famous text from the *Digest* mentions landowners whose estates contain such pits and describes what they make from the clay: amphorae, tiles, and pots intended for sale.⁵ In the late first century AD and during the second, stamped bricks from Rome give the names of dozens of very great families, who produced them on their estates bordering the Tiber or the Nera, where there is an abundance of clay.

However, the other activities mentioned in passing by Varro also have the ring of plausibility. Two and a half centuries later, the jurist Ulpian discussed the returning of inheritances improperly acquired: income deriving from the *praedia urbana* must be returned, even if the buildings have been used as brothels, for (so says Ulpian) 'on many estates of respectable people, brothels are in operation' (trans. S. P. Scott).⁶ This represents a source of profits from an estate additional to those spoken of by Varro. It must have been exploited well before the time of Ulpian. Prostitution was a subsidiary activity of the *tabernae deversoriae*; and it was very probable that it was practised in those recommended by Varro.

In any case, this evidence from Ulpian gives grounds for supposing that all non-agricultural activities carried out on an estate were deemed legitimate. Any profits accruing from the area owned, whether from its land or from its resources such as buildings, tools, livestock, men, and women, were derived from the fact of ownership. They did not amount to commercial profit; and they were referred to as *fructus* rather than as *quaestus*.⁷ Choices about how best to use the land took into account not only the various types of crops, but also the riches to be derived from below the surface. Ulpian's view is that a

⁴ Morel (2009: 69–75) has given a diametrically opposite reading of the same pages in Varro.

⁵ *Dig.* XXXIII. 7, 25. Also VII. 1, 13, 5; VIII. 3, 6; XVIII. 1, 77; XXVII. 9, 3, 6. These last references include mines, lime kilns, stone quarries, and sand and gravel pits, matching exactly what Varro says.

⁶ *Dig.* V. 3, 27, 1: *in multorum honestorum virorum praediis lupanaria exercentur*.

⁷ Which is why Varro always uses the word *fructus*, never *quaestus* (this note corrects an earlier interpretation of mine, still to be seen on p. 169, n. 80). On the terms *fructus*, *quaestus*, and *reditus*, see Minaud (2005: 265–75); Andreau (2007a).

usufructuary has the right to uproot olive trees or vines in order to break up the earth, as long as this increases the yield from the estate and improves the holding.⁸ In Ulpian, income from clay pits or other quarrying work is lumped together with that from agriculture proper: whatever its origin, it is honourable. Here I differ from Paul Veyne, one of whose books led me to the text about the brothels; and I do not include brothel-keeping in his category of 'occasional' or 'inessential' income of the aristocracy.⁹ Running a brothel was part and parcel of the optimal, not to say rational, husbanding of the diverse resources of an estate.

THE LANDOWNER'S RANGE OF ACTIVITIES

Where should one take one's goods and to whom should one sell them? If landowners set no limit to the extent of their activities, then, in relation to the products of their estate they were exercising all the functions of the trader while not being traders; and, from an economic point of view, the greatest of these landowners were active not only in production but in commerce.

On this matter, Varro sheds further light. His chapter 16 deals with the conditions surrounding the estate, 'for they too vitally concern agriculture because of their relation to it'. On this matter, four points should be examined:

whether the neighbourhood is unsafe; whether it is such that it is not profitable to transport our products to it, or to bring back what we need; third, whether usable roads or streams are either wanting or inadequate; and fourth, whether conditions on the neighbouring farms are such as to benefit or to injure our land.

(trans. W. D. Hooper; rev. H. B. Ash)¹⁰

The first of these points relates to the safety of the surrounding area: too many bandits would compromise any kind of business. The second says that an estate must not be too hemmed in; it must have ready outlets (*evectos*) enabling the transport and sale of what is grown. If there is a town close by, that is a plus; and one must accordingly opt for particular crops, of the sort that are sold only there—for example, fields of violets and roses.

Again, if there are towns or villages in the neighbourhood, or even well-furnished lands and farmsteads of rich owners, from which you can purchase at a reasonable

⁸ *Dig.* VII. 1, 13, 5.

⁹ Veyne (2001: 151–2 (1979a: 273–4)). Nor do I include in that category the brothel established by Caligula on the Palatine, which was deemed scandalous because he made matrons and young free-born boys work there.

¹⁰ *Rust.* I. 16, 1. Here Varro is tidying up the advice of Cato, *Agr.* 1, which Pliny would also do: XVIII. 6, 26–8. See also Columella, I. 2, 3.

price what you need for the farm, and to which you can sell your surplus... the farm will be more profitable than if they must be fetched from a distance; sometimes, in fact, more so than if you can supply them yourself by raising them on your own place. (trans. W. D. Hooper; rev. H. B. Ash)¹¹

In these passages the use of the verbs *vendere*, *emere*, and *venire*, and of the adjective *venale*, is noteworthy: the landowner sells (obviously via his *vilicus*, to whom he has delegated this task¹²) what he can of his surplus in the marketplaces close by. A second part of this second point concerns management of staff, which varies with the environment.

In his third point, Varro may appear to be reverting to the beginning of his second one: 'A farm is rendered more profitable by convenience of transportation: if there are roads on which carts¹³ can easily be driven or navigable rivers nearby. We know that transportation to and from many farms is carried on by both these methods' (trans. W. D. Hooper; rev. H. B. Ash). However, it is clear from the care with which the whole passage has been put together that Varro is dealing with something very different from the subject of his second point. This third point has nothing to do with making sure one has readily available outlets and sources of supply; it deals with heavy transport. The system of long-distance transport seems to have been quite separate from the one used in relations with the close neighbourhood. The word he now uses to speak of transport is *vectura*, which can mean either the sum payable to the conveyer (this is the meaning invariably used in the *Digest*) or the action of conveying. And in that usage the word always refers to long-distance transport, which requires quite separate organization. Also, though the words *evehere* and *invehere* are used in this context, terms that mean 'selling' are not. This part is much briefer and more general than the one on the second point. There are no recommendations about staff. Though the availability of heavy cartage may benefit the landowner, there is nothing to show that he is directly involved in its use.

THE SEPARATION BETWEEN PRODUCTION AND LONG-DISTANCE TRADING

This matter is expanded on in two concrete instances mentioned later in *De re rustica*. The first of them is attributed to Murrius, an expert breeder of donkeys, who discusses the raising and use of these animals. Generally intended for working in mills and in the fields, donkeys are used singly, except

¹¹ Varro, *Rust.* I. 16.3.

¹² This was the system of delegating powers *ad mercium distractionem*, *Dig.* XIV. 3, 5, 12, and 3, 16.

¹³ *Plaustra*, heavy wagons with two or four wheels, usually drawn by two oxen.

for those that are sometimes employed for transport: 'They have almost become the flocks of the merchants, as, for instance, those of the merchants who transport on pack asses from the region of Brundisium or Apulia to the sea oil or wine, and grain or other products' (trans. T. Frank, adapted).¹⁴ So the oil and wine arriving from the interior, probably in skins, to be decanted into the amphorae manufactured in the famous workshops of Giancola and Apani near Brundisium were already the property of traders who had organized the initial transport, before loading them onto the ships that would take them to Delos or Alexandria. If we accept Daniele Manacorda's interpretation, the wheat from the Tavoliere delle Puglie going down to *Sipontum* was handled in the same way.

The second instance comes from a treatise on bees and the profits that can be made from honey. The Veianii brothers, veterans of Varro's in Spain, and now petty landowners in *Ager Faliscus*, made much money with their hives. They speculated on high prices, awaiting the best moment to 'let in the trader'.¹⁵

These various products of speculative agriculture, in Apulia, around Brundisium, in Daunia, and Etruria, were sold on the estate to traders. Both of these examples should be added to those that I collected before: Columella's recommendation¹⁶ about 'properly cleaning the *dolia* as soon as they have been emptied by the traders' (trans. H. B. Ash);¹⁷ the traders who bought Pliny the Younger's wine and to whom, as great lords do, he gave discounts because prices later collapsed;¹⁸ sales of standing crops; the stoppers of Italian amphorae from the second and first centuries BC stamped by dealers who may have kept the dies on the boats.¹⁹ One can add the reference in the *Digest* (Paulus) to the traders who were in the habit of buying produce from the imperial estates,²⁰ or J.-P. Morel's point, referring to a different type of

¹⁴ II. 6, 5. Frank (1959: v. 279) had already made the incidental comment: 'it is interesting to see that Varro assumes that the trader gets the produce from the estate and transports it to the sea.' For the beginning of Varro's sentence, I draw on his translation; and for the end of it, the version by Manacorda (1994, 1998).

¹⁵ III. 16,11: *velle expectare ut suo potius tempore mercatorem admitterent*. The translation of *mercatorem* as *client* (= 'customer') in the series published by Universités de France (Charles Guiraud, 1997) speaks volumes about the ambiguous reaction of the modern reader. The passage has been studied by Morley (1996: 161; 2000: 216, 219). On the custom of delaying selling until prices were high, see I, 69, 1.

¹⁶ XII. 52, 14.

¹⁷ Credit goes to Bernard Liou for having drawn attention to this text (Liou and Gassend, 1990: 206).

¹⁸ See pp. 143–4. On the matter of Pliny's dealings with his traders, I share the view of Nicolet (1988: 148) and Morley (2000: 219). There was no negotiation between the parties; but rebates based on a just proportion of the value of the goods bought enhanced Pliny's good name in the neighbourhood, which was what he wanted.

¹⁹ For further details and references, see p. 142.

²⁰ XXXIX. 4, 9, 8: *mercatores autem, qui de fundis fiscalibus mercari consueverunt*.

product, about Diodorus' text on the iron mines of the island of Elba: *emporoi* buy the ingots made on the island (or at *Populonia*), then transport them to Puteoli or elsewhere; after the iron has been transformed into usable goods, others undertake the marketing of them.²¹

The last point, the question of the oil amphorae from Baetica (Dressel 20s), is of particular interest. Of those discovered at Monte Testaccio or in the wrecks of vessels, if the full height of the amphora is intact, the name of the trader can be seen on the neck and the name of the estate and its owner are along the handle; and on almost all of them the names are different. There are, however, three 'landowner-traders, who exported what was produced by their own estates, and also products from other estates'.²² This can be interpreted both as confirming the general rule and as showing that there were exceptions to it.

The foregoing arguments are strengthened by other evidence brought forward some years ago by Jeremy Paterson: jurists have pointed out that, of the many texts in the *Digest* dealing with the sale of wine, not one makes any mention of direct sale to the consumer.²³ In the agricultural writers, we find nothing on the matter of marketing. In 1982, Paterson's conclusion was that 'most large-scale landowners did not get involved directly in the marketing of their agricultural produce, but left this largely to *negotiatores*'.²⁴ But a statement from Elio Lo Cascio gives an opinion that is the exact opposite: 'An owner of vines and olive trees was not only a producer of wine and oil, as well as of amphorae for transporting them, but also, either in person or via agents, the marketer of the produce.'²⁵ Lo Cascio refers to his study of economic life in Pompeii; and, in support of his view, one could cite the shops that can be seen there, flanking the vestibules of some of the most richly appointed houses.²⁶ But what we are dealing with here, even if we rule out the possibility that these were merely premises to let, is trade of the first type—that is, local trade. And that raises no problem. If there is a bone to be picked with Jeremy Paterson, it should be about systematic trading in large quantities of goods destined for distant markets. This again opens up the whole matter of the conduct of the senatorial aristocracy, and it must be borne in mind that the enquiry differs depending on whether we are talking about their direct involvement or their indirect involvement via agents, in accordance with Lo Cascio's distinction.

²¹ Diodorus, V. 13; Morel (1982: 206).

²² Bernard Liou, in Liou and Tchernia (1994: 152).

²³ See Ch. 7.

²⁴ Paterson (1982: 155; augmented 1998: 159–60). See also Ligt (1993: 164); Morley (2000: 214–15).

²⁵ Lo Cascio (2007a), 10.

²⁶ Lo Cascio (2009: 211–34 (1992)). On the shops, see Wallace-Hadrill (1991, 1994). Although my comments on the house of Vibius Pansa are still valid, I am now not as reluctant as I was on pp. 141–2 to accept that some of the shops were used for selling produce from an estate belonging to its owner.

SENATORS ENGAGED IN THE EXPORT BUSINESS?

Instances of direct involvement are certainly extremely rare. We cannot be sure there were none. Let us look first at those cases where it has been argued that senators did own vessels used for large-scale trading.

In 67 BC, Cicero was eagerly awaiting delivery of some Megarian statues and herms in Pentelic marble, with heads made of bronze, which Atticus had bought for him in Athens. 'Lentulus', Cicero wrote, 'promises his ships'. A few days later, he reverts to this: 'If a ship of Lentulus' is not available, put them aboard any you think fit' (trans. D. R. Shackleton Bailey).²⁷ It should be noted that Dressel 1 amphorae bearing the stamp *L. Lentuli P. f.* have been found at different points along the Mediterranean coastline and in Gaul,²⁸ as well as in the Santa Severa wreck near Pyrgi. There the name of Lentulus is accompanied by a series of slaves' names, most of which also turn up in the Dramont A wreck near Fréjus.²⁹ It is concluded from this that the Dramont amphorae also came from the workshop on the estate of *L. Lentulus P. f.* even though his name does not figure on them. It is very likely that we are dealing with L. Cornelius Lentulus Crus, consul in 49 BC, a major landowner at Minturnae; and it is almost certain that Cicero's Lentulus is the same man. Were the wrecks of Santa Severa and Dramont A those of ships that belonged to this Lentulus?

Amphorae from the Dramont A wreck are stoppered with the name of Sex. Arrius; and an anchor from the ship bears an inscription with the same name.³⁰ From this it is concluded that Sex. Arrius was a trader and shipowner who had bought the wine from Lentulus and was conveying it on a vessel either that belonged to him or that he had at least fitted out. It was actually this discovery that largely settled the interpretation of the names on stoppers of pozzolana as being the names of traders.³¹ In this particular case, the idea that Lentulus was transporting his amphorae on his own vessel is not tenable. For the Santa Severa wreck, the same question may remain an open one.

The case of Sestius is somewhat analogous. In July 44 BC, Cicero was understandably worried. He explains to Atticus that, along with Brutus, he is planning to leave Italy by sea. So he gives a brief list of Brutus' naval forces,

²⁷ *Att.* I. 9, 2 (I. 4, 2); I. 8, 2 (I. 5, 2). The goods were eventually carried on a different ship; Cicero had a cargo paid for on its arrival at Caieta, which could not have been done with a vessel belonging to a senator.

²⁸ From Athens to *Sala* in Morocco and at Mont-Beuvray in Gaul. See the map published by Gianfrotta (1982: 21), to be supplemented by Olmer (2003: 298–9).

²⁹ Gianfrotta (1982: 17–21); Parker (1992: 165–6 (no. 371)). In a wreck dating from the same time found off Cape Licosa in Lucania, an amphora fragment shows one of these slaves' names (*Herm*). This may be a third load of produce by Lentulus (Gianfrotta 1998: 105).

³⁰ Hesnard and Gianfrotta (1989: 402, 411 no. B 8, 434 no. A 8).

³¹ Tchernia (1986: 118); Hesnard and Gianfrotta (1989); See also p. 142.

which are better than he believed: 'He and Domitius both have some first-rate double-banked craft, and besides those there are some decent vessels [*luculenta navigia*] belonging to Sestius, Bucilianus, etc.' (trans. D. R. Shackleton Bailey).³² Attention has focused on Sestius' *luculenta navigia*, because the *Sesti* stamps on Dressel 1 amphorae made at *Cosa* are the best known of all, attested at some fifty sites, from Athens to Toulouse and Poitiers, and even as far away as the Titelberg (Luxembourg), the vast majority of them being in Gaul.³³ Amphorae bearing this stamp made up the cargo found in the Grand Congloué 2 wreck, which was the subject of the first underwater retrieval by scuba divers. This stamp, which has been much studied, refers to the *gens Sestia*, whether to P. Sestius, on whose behalf Cicero was to speak, or to his father L. Sestius, if not to both of them.³⁴ A point of some contention is whether Cicero's letter refers to P. Sestius or to his son, called Lucius after his grandfather, who began the work on the Settefinestre villa near *Cosa*. Whomever it refers to, it is tempting to see the *luculenta navigia* as ships belonging to a wine-grower-cum-trader exploiting the whole chain, from production to sale in independent Gaul.³⁵ But several of the amphorae of Sestius on Grand Congloué 2 have their stoppers made of pozzolana and bear the name of L. Titius C. f, a trader's name, as we have just seen.³⁶ L. Titius had bought the wine from Sestius and was responsible for conveying it.³⁷ There is no reason for the Grand Congloué ship to have belonged to Sestius. More importantly, in Cicero's letter, Sestius' ships are for fighting,³⁸ along with other vessels belonging to several great personages who were on the side of Brutus. These ships were now added to his *dicrota* (vessels with two banks of oars) and those of Domitius. Though not specialized warships, they could be transformed for that purpose. So, clearly, they had to be long ships, powered by oars, quite different from the Grand Congloué vessel and from all wrecks with Dressel 1s so far investigated. It should not be forgotten that Cicero's letter mentions not only Sestius and the little-known senator Bucilianus, but also *ceteri*, all the others, showing that quite a lot of people could have owned boats like this one and giving no indication at all that they were all landowners-cum-traders.

In the Verrine speeches, Cicero makes much of a *cybaea* that Verres had been given by the Mamertines. This was a very large vessel, comparable to a

³² *Att.* XVI. 4, 4 (411).

³³ For the most recent listing, see Olmer (2003: 310–13).

³⁴ The dating of the stamps now makes it more likely that it refers to the father, L. Sestius. See Panella (2010: 51).

³⁵ Will (1979: 349); Carandini and Settis (1979: 97); Manacorda (1981: 31–2 (cautious)).

³⁶ Benoit (1961: 52–6); Hesnard and Gianfrotta (1989: no. B 36).

³⁷ Initially, L. Titius was considered to be a neighbour who had sold amphorae to Sestius: Carandini and Settis (1979); Manacorda (1980: 176). See the debate, briefly referred to, between, on the one hand, Carandini (1989b: 509) and Manacorda (1989: 464), and, on the other, Hesnard and Gianfrotta (1989: 427).

³⁸ See discussion in McCann (1987: 16, n. 7) and the survey of the matter by Paterson (1990: 197).

trireme, very handsome, very well fitted out.³⁹ One is reminded of the adjective *luculentus* applied to the ships of Brutus' supporters. Although Cicero describes this vessel several times as an *oneraria navis maxima*, a very large freighter⁴⁰ (which fits with his accusations), it was an oared ship, a trading galley, as Lionel Casson says,⁴¹ a bireme.⁴² So here we have a vessel that could be adapted for naval combat; those of Sestius, Bucilianus and all the others must have been more or less of the same kind, and possibly those of Lentulus as well. It is amusing to note that the purpose Cicero had in mind for Lentulus' ships, transporting works of art, was the very one for which Verres himself had used his *cybaea*. The arguments structuring his speech for the prosecution lead him to define the uses to which a senator could legitimately put such a ship, and there are only two of them: his own travel; and the transporting of products from a maritime estate belonging to him, in accordance with the spirit of the *plebiscitum Claudianum*, which would later be enshrined in law by the *lex Iulia de repetundis*.⁴³

The importance of personal travel has been underestimated. For landowners with estates by the sea, travelling by boat was convenient and commonplace. On such trips, a well-appointed vessel with oars was quicker and more regularly reliable than a boat with sails. Travel of this type may look like recreational boating; but for some itineraries it was just the most comfortable and easiest way of getting from one point to another. In fact, it must be assumed that every rich landowner with an estate or a villa on the coast would have had boats like these. They could be used for conveying freight as well as passengers. Were they used for long-distance trade? Technically, this cannot be ruled out, although underwater archaeology has so far not discovered any hull of this type under the amphorae. There was such a thing as recreational boating. The slave in Plautus' *Rudens* who thinks he has come upon a treasure and imagines he will be rich for ever, sees himself at the height of his fortune, having earned as much as he wants from trading with large ships, able to buy another vessel *animi causa*, solely for his own pleasure and for sailing from one port to another. Cicero himself, with all his fear of the sea, had his son sail on a Rhodian galley. He was extremely worried.⁴⁴

³⁹ Verr. 2.v.44: *navem vero cybaeam, maximam, triremis instar, pulcherrimam atque ornatissimam*.

⁴⁰ Verr. 2.iv.19, 150; v.46.

⁴¹ Casson (1971: 166–7).

⁴² Verr. 2.v.59.

⁴³ See pp. 157–8. The *Digest*, XXXIII. 7, 12, 1 includes ships among the chattels used to *exportare* products from an estate, alongside beasts of burden, carts, kegs, and goat skins; this may very well be referring to short trips (on an estate by the sea, a boat was indispensable for getting to the nearest port), or to transfers to the landowner's town house; see Whittaker (1985), *Ligt* (1993: 164–5) (but he gives a wrong reading of *Dig.* XIV. 3, 4, see Aubert 1994: 7, n. 6). In another context, the same jurist, Ulpian, defines the term *navis* as covering river boats and even rafts (XIV. 1, 1, 6).

⁴⁴ Plautus, *Rudens*, 932–3: Jean Bayet uses the word 'yacht' in his translation in *Littérature latine*, 55. Cicero, *Att.* X. 11.

Another approach would be through identification of individuals. Stoppers of Dressel 1 wine amphorae, dating from the last years of the Republic, have yielded the names of more than forty traders; and we have more than 400 others from the first and second centuries AD, painted on the sides of Dressel 20 oil amphorae from Baetica. From a milieu in which freed slaves rub shoulders with freeborn men of lowish or middling rank, three names stand out in a problematic way,⁴⁵ because they may belong to men of importance. I examine them briefly.

A stopper in a Dressel 1B amphora from the Foce Verde wreck (on the coast of Latium, not far from Torre Astura),⁴⁶ bears the stamp *Ti. Clau(di) Ti. f.* At the time of the Republic, there is a strong chance that this means a member of the great family of the Tiberi Claudii Nerones, ancestors of Tiberius.⁴⁷ No more can be said with accuracy.

The name of *C. Sornatius C. f.* was read long ago on a plaster amphora stopper, now lost, found near *Castrum Novum*, south of Picenum, in the *Ager Praetutianus* on the Adriatic side of Italy.⁴⁸ The name was deemed by Münzer, Ronald Syme, T. P. Wiseman, and more recently M.-P. Guidobaldi to be that of Lucullus' legate, C. Sornatius, of the Velina tribe and thus hailing from Picenum, who was also a benefactor of the slave traders at *Acmonia* in Phrygia.⁴⁹ If C. Sornatius was engaged in the wine trade with the East, there is nothing at all surprising in his having enjoyed good relations with the slave traders of Asia Minor: bartering wine for slaves was the core of the period's economy. It seems most plausible that he was an owner of vineyards who participated in the distant distribution of his wine; and this he did in the most visible way, with his name placed in the position usually reserved for a trader's.

In 1991, the name of Q. Cornelius Quadratus was found on an amphora from Monte Testaccio, painted on the part of the vessel where the names of oil traders from Baetica appear.⁵⁰ Given that the dates are right, everything points

⁴⁵ D. Nonnis squarely faced this problem in an extremely scholarly article (2003: 267–8): 'Weak evidence based on names, whose validity has given rise, even quite recently, to conflicting opinions'; see the contrast between his pp. 257 and 271–2. I include in my study neither the stamp *Ahenobarbi* on an anchor in the Palermo museum, from the Isola delle Femmine, but without reliable provenance (Gianfrotta 1980: 111; Hesnard and Gianfrotta 1989: 433, no. A. 6) nor the one in the name of C. Aquilius Proculus (probably the consul of 90 AD) on an anchor retrieved off Punta Licosa (Gianfrotta 1974; 1980: 112; Hesnard and Gianfrotta, 1989: 434, no. A. 7). In neither of these cases do we know what type of ship they came from. On several occasions, the Domitii Ahenobarbi family commanded war fleets.

⁴⁶ Gianfrotta (1998: 106).

⁴⁷ Nonnis (2003: 271–2).

⁴⁸ Hesnard and Gianfrotta (1989: 425, no. B. 33 = *CIL* XI. 6080, 21).

⁴⁹ Syme (1964: 123); Wiseman (1971: 262, n. 406); Guidobaldi (1996). See also Zevi (2005: 823). Harris (1980: 127, 129–30) is more tentative. Gianfrotta (in Hesnard and Gianfrotta 1989) sees the wine merchant as either the father or the son of the legate.

⁵⁰ Rodríguez Almeida (1994: 120–2, nos 9, 10). Remesal Rodríguez and Aguilera Martín (2001: 51) dispute the identification (but misconstrue the Italian of their compatriot Rodríguez Almeida). Cf. Liou and Tcherna (1994: 150, n. 9); Andreau (1999a: 288).

to this being the name of the suffect consul of AD 147, who was also the brother of Fronto, the orator and friend of Marcus Aurelius. Fronto was born in *Cirta* in Numidia; the family appears to have had connections neither with Spain nor with trade. In addition, the same name figures in another inscription, atypical this time, in red letters of different appearance, discovered 'some distance away from the previous one'. Inscriptions in red seem to mean not traders, but rather consignees. The one in black may mean the same, if we remember the inscriptions found at Augsburg where the name of the procurator of Raetia occupies the place normally occupied by the trader's name.⁵¹ The inscription on the bellies of Dressel 20 amphorae means the owner of the oil at the time of lading, normally a trader, but in rare cases a customer who has bought at source via an agent and is now having the amphorae conveyed to his residence. This interpretation could be accepted unhesitatingly, were it not for the fact that two other Q. Cornelii must be considered: Fuscinus and Galenus, traders at the same period, as well as a stamp in the name of Q. *Co(rnelius) Cl(emens)*, the owner of an amphora workshop and possibly also of olive groves in Baetica. The *gentilicium* (family name) Cornelius was one of the most widespread; but only a small minority used the *praenomen* Quintus. Let us leave open the possibility that Q. Cornelius Quadratus was, perhaps very briefly, an oil-trader in Baetica, probably a landowner-trader.

Here now is a very different case, deriving from a comment by Louis Robert. We know, from the lemma of a poem in *The Greek Anthology* (XIV. 72), that L. Cuspius Pactumeius Rufinus, a grand personage originally from Pergamon, consul in AD 142, consulted the oracle at Didyma to find out 'how he would have his own skipper swear an oath'. Robert concludes from this that he was the owner of a seagoing commercial enterprise.⁵² This deduction was accepted and built upon by John D'Arms and Harry Pleket, who included Rufinus in their lists of magistrates who may have engaged in trade.⁵³ The fact is that, if Louis Robert's conclusion is sound,⁵⁴ this would be not only the most clearly established case of it but also the only one in which there is participation in transport by sea.

All the foregoing considered, we can now assume that, in rare cases, there may have been senators who publicly owned to being traders, most likely exporters of the produce of their estates; and in one case we may be dealing with an entrepreneur engaged in sea transport.⁵⁵ As such, they would contravene custom and propriety; and they should be added to the three exceptions to the principle of separation between production and large-scale trade offered by the 'trading landowners' of Baetica.

⁵¹ See p. 81. ⁵² Robert (1968: 598–9).

⁵³ D'Arms (1981: 158); Pleket (1983: 137; 1984: 14).

⁵⁴ It is disputed by Whittaker (1985: 58).

⁵⁵ My conclusions more or less coincide with those of Dominic Rathbone (2003: 203–4).

They would also cast doubt upon the whole theory that there was widespread but secret participation in a dishonourable activity, in response to a temptation that was irresistible but could be yielded to only covertly. The case of the consul for 142 stands out particularly: here is a man who, in the exercise of his business activity, consults a solemn oracle and receives an answer that became famous. In so doing, he was quite overtly infringing the ban on owning ships *in quaestum*. Nor did he consult the oracle in secret. And the answer given involved such a peculiar procedure (have the skipper swear his oath at daybreak, while turning eastwards, with one foot in the sea and the other on the beach, and invoking such deities that the oath would bind Jupiter himself) that it was included in *The Greek Anthology*.⁵⁶

IDEOLOGICAL PROBLEMS

Let us now go back to the book by the staunchest defender of the thesis that there was a large amount of covert activity, John D'Arms. Ever since he devoted his opening pages to Jean-Samuel Depont, the Intendant at Metz in the early 1770s, and to the man's bitterness at having had a grandfather who engaged in maritime trade, the spectre of loss of nobility has hovered over discussion of the possible participation of senators, or even decurions, in commercial activities.⁵⁷ D'Arms's idea that 'Jean-Samuel Depont, Cicero, Tacitus, and Pliny have this in common, that they exhibit an attitude which might be described as one of moral disdain for traders and men of commerce' justifies a stance of suspicion that, since D'Arms, has often been taken to be a conclusive demonstration. Let us now take a closer look at the validity of this analogy with France in the seventeenth and eighteenth centuries.

Until a royal statute of 1629, reinforced by an edict in 1669, any nobleman who engaged in trade lost his nobility. Unless he entered the army, the magistrature, or the clergy, he could do nothing but look after his lands; and, so, much of his life was spent in idleness. The basic principle was that the origin and justification of nobility lay in bearing arms. Those who were opposed to the mercantilism of the seventeenth-century monarchy and its efforts to establish an aristocracy of commerce pointed out several times that engaging in trade, a practice that grew in times of peace, was at total variance with the mettle of a soldier.⁵⁸

⁵⁶ *Greek Anthology*, XIV. 72.

⁵⁷ D'Arms (1981: 1–2, 7). For the importance of the analogy to D'Arms's argument, and the way he used it, see Pleket (1983: 140; 1984: 4–6). Pleket's general position is, however, quite close to that of D'Arms. D'Arms drew on a then recent book by the American biographer Robert Forster (1981). Schleich (1984: 39–42), has discussed the relevance of the analogy and its limitations.

⁵⁸ Richard (1997: 37).

Ideas prevalent in Antiquity were very different, since the elite exercised a role in governance. As says Plutarch at the end of his lives of Aristides and Cato, the man who has chosen political life, meaning someone who has devoted himself to the service of the body politic and civil society, must have no other preoccupation, *οὐδεμίαν ἀσχολίαν*, no other *negotium* than what is entailed in his political activities.⁵⁹ This was why he could not work. A senator's wealth came from a supposedly regular flow of income into his purse: the product of his country estates and all their ongoing activities, interest from money lent, and in some cases rent from buildings. The attention he gave to such things would be only occasional. As sources of income, trade and long-distance transport provided neither the same facility nor the same security. They demanded constant attention and action, rapid reactions (the *ταχυεργία* mentioned in the speech by Censorinus quoted in my Introduction,⁶⁰ all very different from the type of activity that sufficed for the exploitation of the land, with its predictable and seasonal bearing of fruits, by the expectation of rents coming in, or the equally regular production of goods by one's slaves.

This provides the key with which to read the oft-quoted text of *De officiis*, where Cicero develops an argument about the respectability of professions, *artificia et quaestus*, which in any case no senator would practise. As Cicero says in passing, his text has nothing whatever to do with any greater or lesser latitude afforded to senators' engaging in trade. It does not deal with them.⁶¹ Several criteria inform Cicero's division of activities into either base or worthy of a free man (*sordidae* or *liberales*). First and foremost is unpopularity, which taints usurers and tax-gatherers. Then there is dependency, which is all the greater when the work requires less competence. Those who have nothing to sell but the strength of their arms (*operae*) stand below those who at least have a skill (*artes*); and, to be admitted to the liberal arts, intellectual ability is required, as in architects and doctors. The problem of trade comes up twice: its first mention defines what constitutes petty commerce and why it is beyond the pale; its second, by contrast, brings large-scale trade within the pale.

In the learned portrait of the trader given by Andrea Giardina (with such talent that it must chasten anyone who would attempt to do likewise), several pages stress the radical difference between the *emporos*, the great trader who sails the seas, and the *kapelos*, the retailer or shopkeeper, which he translates into Latin as *tabernarius*. On this matter, the most striking text is to be found in the passage from the *Life of Apollonius of Tyana* mentioned in my

⁵⁹ Plutarch, *Cato ma.* XXXI. 2 (354f); cf. Nicolet (1988: 176). The principle derived from Greek discussions of the city state; see Aristotle, *Pol.* II. 11, 8 and 10 (1273a).

⁶⁰ See p. 3.

⁶¹ *Off.* I. 150–1. The problem raised by the activities enumerated concerns *iis quorum ordinis conveniunt* (151).

Introduction,⁶² to the effect that one of the drawbacks of maritime trade is that, in seaports, one is constrained to rub shoulders with *kapeloi*.⁶³

The latter evince none of the qualities that are estimable in traders: courage, energy, and perseverance. In Cicero's text, the contrast is based first on social utility: those who go in for large-scale trade supply products from far away; they play a role in bringing peoples together, which, as stated above, is one of the positive effects of commerce. They tend cities, as doctors tend patients.⁶⁴ However, those 'who buy from traders to resell immediately' do not suffer from delays and do not effect a significant transfer of goods from one place to another. They are considered to endow goods with no added value and to render no service to anyone. Hence, the only way they can make a profit is by lying.

On the other hand, the activity of those who engage in large-scale trade (and, if they are contrasted with those who buy from traders, it must no doubt be deduced that they buy from the producers) is not reprehensible. It becomes in fact praiseworthy on the day when they tire of their efforts, deeming themselves to be rich enough, leave the port, buy land, and set about cultivating it.

For our present purposes, let us note that large-scale trade dishonours no one; it is a *quaestus* as defensible as the *artes liberales* of the doctor or architect, one that is potentially highly respectable if one proves, by abandoning it, that one is free of the defects of traders and is capable of preferring the noblest source of riches, agriculture. As Giardina says, Cicero's idea 'rests on the premise that any outright condemnation of large-scale trade is impossible'.⁶⁵ Whatever the case may be, though, it is not seemly for senators to engage in it.

THE SECRECY THEORY

The most widely held view is that, despite this, senators did engage in it, breaching the social taboo and getting round the only law that could hinder

⁶² See p. 4.

⁶³ Giardina (2002a: 327–35 (Giardina and Gurevič (1994: 20–9)). Philostratus, VA IV. 32. However, Rougé (1966: 270–1) has pointed out three texts in which the *kapelos* sails the sea.

⁶⁴ Seneca, *Ben.* IV. 13, 3: *Mercator urbibus prodest, medicus aegris*.

⁶⁵ Giardina (2002a: 333–4 (Giardina and Gurevič, 1994: 29)) also draws attention to the eulogy of traders in the preface to Cato's *De agricultura*. Also Gabba (1988: 94–6 (1980)); Narducci (1989: 234–5, 257–65). Two and a half centuries after Cicero, Philostratus has Apollonius of Tyana admit that, in his bout of eloquence aimed at making the young Spartan aristocrat abandon his trade, he exaggerated his account of the drawbacks of maritime trade. Ultimately, the only argument of substance remaining is its incompatibility with the elevated status of his ancestors. See also D'Arms (1981: 23–4).

them, the *lex Iulia de repetundis*, which forbade them only one thing, to be ship operators.⁶⁶ It is argued that they concealed this activity, as Jean-Samuel Depont concealed his forebears, taking advantage of the many loopholes in the legislation on companies and delegation of powers to deputies, and drawing on their dependants for 'men of straw', 'camouflage', or 'barely visible ways of getting round the law'.⁶⁷

It is as easy to demonstrate that such behaviours were possible as it is difficult to prove their existence or non-existence from attested instances, given that it is of their nature to remain concealed.⁶⁸ It is this very circumstance that lends weight to the theory. It rests, however, on two assumptions that should not go unchallenged.

The first of these is the intent of senators to find sources of wealth other than those already canvassed (not to mention their profits from politics, which, under the Republic at least, outstripped all others) and their preference for self-enrichment through trade.⁶⁹ The second is that it was impossible for them to do this openly by breaching the social taboo and either repealing the law on shipowning or letting it fall into abeyance.

There is nothing necessary or irresistible in either of these assumptions. It would be absurd to think that history could give no example of a great fortune that was not derived from trade. Drinkwater has, on the contrary, claimed that in no pre-industrial economy was any substantial fortune earned except through politics or warfare.⁷⁰

The example of France shows, for its part, that a social taboo can be so deeply ingrained that the possibility of taking part in lucrative financial activities may tempt few people. In the seventeenth and eighteenth centuries, the efforts of the monarchy to establish a nobility based on commerce in accordance with its mercantilist policy met with little success, because 'too many aristocrats looked down on commercial activity, and in particular had neither a taste for it nor the financial means to engage in it successfully'.⁷¹ Let us focus less on the financial means and more on the greater influence of the

⁶⁶ See p. 133, n. 4, and pp. 154–5.

⁶⁷ C  beillac-Gervasoni (1998: 174); Aubert (1999: 164); Nonnis (2003: 272). (This is a random sample of comments from not too long ago.) See also Pleket (1984: 28) 'merchants in disguise'; Giardina (2002a: 333 (Giardina and Gurevi   1994: 28)). The idea was already in Juglar (1894: XX): 'the invisible master behind them'.

⁶⁸ 'For it is at times as impossible to prove what is unverifiable as it is to disprove it' (Nicolas Tran 2006: 382).

⁶⁹ The origin of this assumption can be found in Rostovtzeff (1957: 153): he had no doubt that 'the source of large fortunes was commerce'. As usual, this statement was based on no exact references to his famous notes: 'As far as I can judge from the evidence I have got together, the source of large fortunes was commerce.' See MacMullen (1974: 49); Salmeri (1998: 60).

⁷⁰ Drinkwater (2001: 303).

⁷¹ Richard (1997: 13; cf. 43–54, 67–8).

social taboo and the habit of a different way of life, even despite governmental encouragement.

In the places where the royal policy had greater success, Marseilles or Brittany, the local nobility had been active in trade for a long time. The nobles of Provence, who were often descended from traders raised to the nobility in the fifteenth, sixteenth, and even seventeenth centuries, had a high regard for commerce; and by 1556 they had obtained an exemption from the rules governing deprivation of nobility. In Brittany, customary practice represented a different form of protection. The example of Jean-Samuel Depont can be countered with the example of Chateaubriand's father: a younger son, he spent forty years in shipowning, thirty of them in trade of all sorts, including the slave trade, before retiring in 1776 to Combourg, which he had bought fifteen years earlier, there to spend the last years of his life in upholding his nobility and his rights and in basking in the glories of his family tree: 'My father was ruled by a single passion: that of his escutcheon.' And yet, on the same page, Chateaubriand makes no bones about saying: 'He grew rich through the colonies and laid the foundation of his family's new fortune.'⁷² An even greater range of possibilities can be seen in the Italian nobility's complex relation to business, with great differences between periods, regions, the origins of aristocratic wealth, and the economic activities of cities and states: 'In one place, any compatibility between business and nobility is ruled out; in others, it is accepted; elsewhere, there is a hierarchy of activities.'⁷³ So, on this matter, there is no uniformity of attitudes and behaviours; and no incidental set of circumstances can be argued to represent a universal mode of conduct or relied on as a key to understanding.

As for the legal prohibition on owning ships, if it really was bothersome, there may appear to be something surprising in its force and durability. There are plenty of examples of laws inhibiting senators that quite quickly fell into abeyance in the last days of the Republic and under the Empire. Even leaving aside the sumptuary laws, the letter of the *plebiscitum Claudianum* was soon disobeyed; and the *lex de modo credendi possidendique intra Italiam* was flouted by just about everybody, so much so that, during the reign of Tiberius, there was hardly a senator who was not subject to the accusations of *delatores*; and, after the crisis had passed, that law was not revived. Even more relevant to my argument is a *lex Clodia*, which prohibited the scribes of quaestors from engaging in trade; but that did not prevent them from doing so 'as was customary, though against the law'. Thus, the tellers and book-keepers responsible for public moneys, who belonged to the higher ranks of the *ordo apparitorum*, had acquired the habit of openly infringing a law that seems a self-evidently necessary one. Domitian pardoned them for their past

⁷² Chateaubriand, *Mémoires d'outre-tombe*, bk I, ch. I.

⁷³ Angiolini (1995: 103).

misdeeds.⁷⁴ All this suggests that, if senators had really wished to be ship-owners, they could have done it without being surreptitious.

The distinction between local retailing and long-distance trading puts a finer point upon the problem. This was stated by Wiseman in 1971 (though unfortunately in the rest of his book he did not flesh out the implications of the idea): 'The local disposal of surplus produce must have been considered a legitimate by-product of the agricultural life; large-scale surplus for export was a different matter.'⁷⁵ Varro looked without disapproval on the inns that his fellows had established on the borders of their estates; in Pompeii, people who sold products from their estates in shops flanking the *fauces* of their grand houses did so quite openly; senators had their names put on the bricks and tiles that they sold for the great Roman constructions and produced particularly in the area near the confluence of the Tiber and the Nera.⁷⁶ This instance shows that the idea of selling locally could be flexible, when the market was as great as Rome itself and transport as easy as along the Tiber.

On the other hand, when the veterans, the Veianii brothers, summoned the merchants to buy their honey, and even more so when the freedman Remmius Palaemon, a man of money, 'dynamic and enterprising',⁷⁷ sold his vintage on the vine, this was not because trading was not consistent with their rank. It was not about ideology, but about an economic arrangement, a distribution of tasks, which is no cause for surprise. The job of the vine-grower and wine-maker was far removed from that of the *negotiatores* who, in the final years of the Republic, were in contact with the aristocracy of independent Gaul, bartering wine for slaves, organizing the flow of slaves into Italy and the selling of them. There is a world of difference between harvesting the oil from one's olive groves in Baetica and setting up ways of transporting it from Cadiz to the Rhine. The separation between production and trading was not universal as an economic arrangement; but it was one that was frequently adopted. For centuries, the distribution of the great wines of the Médoc region was managed almost entirely by large British companies or by merchants in the Chartrons district of the city of Bordeaux itself. When the estate managers sold their wines retail, either in Médoc or to inns in Bordeaux, it was only because the year had been so bad that the merchants would not touch them. In 1666, when Arnaud de Pontac, the owner of Château Haut-Brion, sent his son to London

⁷⁴ Suetonius, *Dom.* IX. 6: *scribas questorios negotiantis ex consuetudine sed contra Clodiam legem venia in praeteritum donavit*. This argument was presented by Pavis d'Escurac (1977: 341–2).

⁷⁵ Wiseman (1971: 79).

⁷⁶ On whether the workshops were managed directly or not by the owners, and on the disagreement between Tapio Helen and Margareta Steinby, see now Jean Andreau (2009; 2010: 126–8), who comes down in favour of Steinby's opinion that, in about two-thirds of cases, they took an active part in it.

⁷⁷ Morel (2002: 286).

to set up a trading house and a luxury restaurant where he sold his wine, it was an innovation, 'a brilliant idea' (says René Pijassou), but one that was taken up by no one else. Even as late as 1969, only 16.5 per cent of Médoc were sold directly by the growers.⁷⁸ And in Burgundy, in the early 1960s, sales of 95 per cent of *appellation contrôlée* wines were in the hands of merchants.⁷⁹

FINANCING TRADE AND ITS CHANNELS

Despite all this, the substantial sums invested in trade, particularly in maritime trade, make one think that they must have come in part from the wealthiest men.⁸⁰ The view of Paul Veyne, though dating from thirty years ago, can hardly be questioned: 'The copious income that land-holders raked in was lent to merchants; or else these owners transformed their slaves into merchants.'⁸¹ Indeed, the most recent data on the prices of merchandise from the East actually increase the amounts required. Veyne distinguishes, however, between two different channels by which funds could flow from the estate-owner to traders: loans; and using slaves as agents. These channels are worth examining.

Appointment of Slaves as Agents and the *peculium*

As has been seen, the use of agents by aristocrats is a strategy often referred to by the historiographers. There can be no doubt that the documents, particularly legal texts, attest to the abundance of agents in commercial operations. Nor is it doubtful that this role was most often played by dependants, either freedmen or slaves.⁸² From two texts, which are especially helpful because they are clearly independent of one another, we get an overview of the use of slaves as agents. The first is by the jurist Labeo: 'Where anyone has appointed his slave to lend money at interest, to cultivate land, to engage in commerce, or to make contracts, then he is liable in full' (trans. S. P. Scott). The second comes from Plutarch, who deplores the fact that people are not nearly as careful in

⁷⁸ Pijassou (1980: 348–9, 1055).

⁷⁹ Grivot (1964: 195).

⁸⁰ On the financing of maritime trade, Rathbone (2003) should be added to the references given on p. 135, n. 6). On the basis of documentary papyri, Rathbone reduces the cost of construction of Roman ships, while pointing out that more often than not the cargoes were worth more than the vessel.

⁸¹ Veyne (2001: 162 (1979a: 280)).

⁸² Free-born men were not excluded: *Dig. XIV. 3,1; 3,7*. On the other hand, Aubert (1994: 134) notes that 'legal texts do not say much about legally independent agents, whether freedmen or free-born'.

choosing the slaves appointed to educate their children as they are in choosing those who are to be 'farmers, masters of their ships, merchants, managers, or money-lenders' (trans. Cole Babbitt, adapted).⁸³ In both texts, the three recurring activities are agriculture, money-lending, and trade.

Slaves could be used in trade in two ways. Either they could be delegated to a definite role, in which they acted on behalf of their master, or they could be granted a *peculium* and directed towards some autonomous commercial activity.⁸⁴ The *peculium* was, as it were, 'set aside from the rest of the master's total assets'.⁸⁵ The slave could manage this sum as he saw fit. Whatever belonged to him remained the property of the master, though it was customary for the latter not to take back the *peculium*, unless something untoward gave him cause to. The granting of it was something of a gamble made by a master on the success of the slave; and it was profitable only in the long term, either when the slave died (in which case, the *peculium* reverted to the master or to his heir, augmented by all the profits that might have accrued), or when he negotiated his freedom.⁸⁶ The advantage was that, if things turned out badly, the *in solidum* responsibility defined in Labeo's text was reduced to a responsibility limited to the amount of the *peculium*.

Even when granted a *peculium*, a slave could still be delegated by his master. The legal texts, in particular the passage in Ulpian about the *actio exercitoria*, define a strict distinction between two levels of responsibility for the master, depending on whether he expressed his intention to appoint the slave to a particular function or whether the slave chose it without being appointed or even without the master's knowing. In the first eventuality, the master's responsibility was total; in the second, it was limited to the amount of the *peculium*. In the latter case, and generally whenever necessary, a distinction was made between the *merces peculiares*, purchased with the *peculium* and to be treated in accordance with the slave's choices, and the ones that constitute his stock in trade under the rules of his delegated powers.⁸⁷

From the particular instances of slaves engaging in large-scale trade that are known to us, we cannot tell whether they were working under the *peculium* system or the delegation system. This also applies to the two names of slaves

⁸³ Dig. XIV. 3, 5, 2–3: *Labeo quoque scripsit, si quis pecuniis faenerandis, agris colendis, mercaturis redempturisque faciendis praeposuerit, in solidum eum teneri*; Plutarch, *De liberis educandis* 7 (4 A–B): τῶν γὰρ δούλων τῶν σπουδαίων τοὺς μὲν γεωργοὺς ἀποδεικνύουσι, τοὺς δὲ ναυκλήρους, τοὺς δ' ἐμπόρους, τοὺς δ' οἰκόνομους, τοὺς δὲ δανειστάς. Cf. Pleket (1983: 137); Rathbone (2003: 205).

⁸⁴ This distinction had already been made perfectly clear by Juglar (1894: 11, 81 and *passim*).

⁸⁵ Dig. XV. 1, 5, 4.

⁸⁶ Hopkins (1978: 125–6); Aubert (1994: 65–70); Andreau (1999b: 105–6; 2001: 129–35, 278; 2004); Andreau and Descat (2006: 133–49).

⁸⁷ See Ulpian's text on the edict of the praetor who established the *actio exercitoria*, Dig. XIV. 1, 1, 1–25 (especially 19–20); and Alfenus Varus, Dig. XLVI. 3, 35. Aubert (1994: 58–70) has clarified the texts with all the necessary nuances.

known from stoppers of Dressel 1 amphorae,⁸⁸ as well as to the name of a shipowning slave that appears on two anchors (Nicia, a slave of L. Villius, must have lost two ships, one in Sicily, the other in Sardinia).⁸⁹ For the *exercitor navis*, the jurist Paul canvasses both possibilities.⁹⁰ As for the two authors already quoted, Labeo makes explicit mention of the delegation system, whereas Plutarch's verb ἀποδεικνύναι leaves more latitude for interpretation.

Jean-Jacques Aubert has summarized the range of different reciprocal relations that could exist between a principal and an agent.⁹¹ The principal could set his agent successive tasks, one by one; and in that case his personal engagement in the activity was very close. Clearly, he was maintaining a professional activity, as a trader using an agent to develop his business. If, however, the agent's appointment was ongoing, then there were two possible scenarios. The first possibility was that the principal remained in charge of everything, took all strategic decisions, and pocketed the profits. Here the agent was acting in lieu of the principal. But, in the other case, the agent could have carte blanche and was free to choose his own *modus operandi* from start to finish. Only his field of action might at times be set for him. And, in that situation, the principal's role was not that of an entrepreneur, but rather of an investor or a bond holder.⁹²

It is at that far end of the spectrum that we find the position of the slave with a *peculium*. The *peculium* system did not necessarily function very differently from the system of making loans to freedmen, except that, for as long as the slave held his *peculium*, the only benefit it afforded the master was its guarantee of proper conduct. The delegated slave, by contrast, acted always in accordance with the *voluntas* of his master, who had to be aware of what he was doing. However, the closeness of this surveillance was very variable, encompassing a range that might include both of Aubert's categories.⁹³

Trading slaves do not figure in the archives of the financial enterprise of the Sulpicii in Puteoli. What one does find, though, is money-lending slaves who belonged to great families or to the emperor. They made loans to traders or others, sometimes committing substantial sums, up to 125,000 sesterces. If these slaves were on the *peculium* system, they were handling large amounts of money, which is not impossible—one thinks of the inscription of Zosimus, freedman of M. Aurelius Cotta Maximus, consul in 20, who had given him sums equivalent to the property qualification of the equestrian order.⁹⁴ If they were agents, in what sense could a principal like the emperor express his *voluntas* to such slaves? Possibly by instructing them to work with the Sulpicii;

⁸⁸ Hesnard and Gianfrotta (1989: 422, no. B. 26); Manacorda (1989: 462, no. 78); Aubert (1994: 272).

⁸⁹ Hesnard and Gianfrotta (1989: 437, no. A. 24); Gianfrotta (2008: 65–6).

⁹⁰ Dig. IX. 4, 19, 2. ⁹¹ Aubert (1994: 4–5).

⁹² As Andreau says (1997: 21–2 (1985a)). ⁹³ Andreau (2004: 122).

⁹⁴ CIL XIV. 2298 = ILS 1949.

but that is far from certain. This is a situation that has obviously caused problems for those who have looked into it closely. When Jean Andreau says 'the emperor or the senator, for their part, had absolutely nothing to do with details of management, though of course the profit, or a part of it at least, was credited to them', the line between the essential and the details is unclear, and the mechanism for the crediting of the profits remains to be defined.⁹⁵

All things considered, the detailed functioning of the delegation system as used by landowners to engage in large-scale trade (that is, going beyond local trading, which was in the hands of *tabernarii* slaves or *vilici* charged with the *distractio mercium*) is difficult, if not impossible, to define. Andrzej Łoś, for example, at the end of his investigation into the inscriptions painted on amphorae at Pompeii, with the aim of discovering the names of traders who were dependants of municipal notables, concluded that it was impossible to define the degree to which the latter participated in the trade carried out by their dependants: 'Beyond this point, further discussion on the matter would be mere speculation.'⁹⁶

The field of action open to a delegated slave was generally narrow and strictly defined. However, two texts give some grounds for seeing the delegation system as compatible with a certain breadth and flexibility, while still involving the owner. They are the sentences in the *Digest* that speak of *exercere negotiationes per servos ac liberos*, carrying out business via slaves and freedmen. A debtor could not free his slaves, who represent capital owed to creditors. However,

men very frequently think that their property is more valuable than it really is, which often happens to those who, through the agency of slaves and freedmen, conduct commercial enterprises beyond sea, and in countries in which they do not reside, because they are often impoverished by transactions of this kind for a long time without being aware of it; and they grant their slaves freedom by manumitting them as a favour, without any intention of committing fraud.

(trans. S. P. Scott)⁹⁷

This is a fine text; but the situation outlined in it is nonetheless strange. There is no question of a loan or of a *peculium*, since financial responsibility remains entirely the owner's. Yet he has had no news for a long time of the bad state of the business being contracted by his delegated slaves (*adtritris longo tempore*), meaning that he had not even kept a regular eye on the profit accruing to himself. His conduct has been no different from what it would have been had he been in the first category. It is as though, in these transactions, the practices

⁹⁵ Andreau (2001: 144).

⁹⁶ Łoś (2005: 105).

⁹⁷ *Dig.* XL. 9, 10; XXVI. 7, 58.

normally followed under the *peculium* or loan system had been extended to the delegation system.⁹⁸

The largest employers of executive agents, whether slaves or not, must have been the traders themselves. When regular trading is established between two widely separated places, there has to be at least one representative at the point of departure and another at the point of arrival; and one of these will be an agent.⁹⁹ Among the traders in salted fish and oil from Baetica whose names figure on the amphorae found at Pompeii and Rome, there are, besides residents of *Hispalis* or *Astigi*, men from Narbonne and Puteoli, who of necessity made use of agents at the places of production. The best known are P. Olitius Apollonius, a shipowning freedman and *sevir Augustalis* at Narbonne, and his compatriot Sex. Fadius Secundus Musa, a *flamen* of Narbonne, whose names are on amphorae from Monte Testaccio in Rome; they needed agents at *Hispalis* or in Cadiz and others at Rome.¹⁰⁰ There is no shortage of other examples.

The grandest traders did not sail with their merchandise;¹⁰¹ they despatched it in the charge of an appointed agent. If they were also the owners or charterers of the ship, this agent might be the *magister navis*, and as such a delegated slave, or, if not, might have a different position of equal status aboard the ship.

P. Granius, from Puteoli, was called by Cicero as a witness for the prosecution, because Verres had taken possession of his boat and his merchandise, after having had his freedmen executed, which means he had several agents on board.¹⁰² Owners had fleets of several ships, as can be seen in part from the advantages available to those who had five ships of 10,000 *modii* built and put them at the service of the *annona* for five years: there had to be at least one agent on each ship.¹⁰³ This role was played by the *magistri navium*, who were often slaves. On the *Isis* as described by Lucian, when Adeimantos, carried away by the sight of this great ship blown off course and ending up at Athens, imagines that he owns her and everything in her, 'cargo, traders, women, sailors, and everything that is most pleasant in the world' (trans. K. Kilburn),¹⁰⁴ it should be noted that the traders in question are slaves appointed by the great grain merchants of Alexandria.

⁹⁸ On these matters, see Andreau (2004: 120–2). ⁹⁹ Aubert (1999: 149).

¹⁰⁰ See pp. 235 and 270–1.

¹⁰¹ Neither did Trimalchio (see Aubert 1999: 146).

¹⁰² Cicero, *II Verr.* V. 154.

¹⁰³ *Dig.* L. 5, 3. One hopes that L. Ferranius Celer, three of whose wrecked ships have been found, two in Italy and one in Spain, identified by the anchors bearing his name, owned several vessels (Hesnard and Gianfrotta 1989: 435, no. A. 15). As we have seen, Nicia, a slave of L. Villius, must have lost two ships. Rathbone (2003: 204) considers that, according to the papyrological record, it was rare for several ships to be owned; but he mentions two cases in the third century, of masters of ships transporting grain for the *annona*.

¹⁰⁴ See p. 132.

It is no doubt these appointed slaves who are the subject of legal texts on the *actio exercitoria*, and the pyramid that went from a *dominus* or *exercitor navis* or *navium* (the owner or user of ships in which the merchandise carried was often his own) to the *magistri navium* (the shipboard representatives of the *exercitor* as shipowner and in some cases trader) and possibly to the *vicarii* whom the latter appointed in their turn.¹⁰⁵

Lending

In a purely metaphorical passage, Seneca says to Lucilius (explaining the secret of true enrichment: curbing one's desires), 'to do business, one must borrow'. This is a well-known passage. Paul Veyne comments as follows: 'So little is known about some sectors of the Roman economy that this sentence is crucial. What we learn from it is that businesses functioned by means of credit and that there was such a thing as company credit.'¹⁰⁶ In an earlier letter, Seneca had already alluded to loans contracted either by traders or by farmers.¹⁰⁷ Credit was still available, even if the ship and the transaction foundered. This was the meaning of the gratitude expressed in a funerary inscription to the divine and nurturing *Fides* by a valiant trader from Brundisium, who, though broken by misfortune three times, had been enabled to rise again each time by credit.¹⁰⁸ These texts should be balanced against a great many others, which give clear and cogent evidence showing without a shadow of doubt that senators under the Empire divided their fortunes into two parts, lands and lending money.¹⁰⁹ Supply of loans and demand for credit of necessity coincided. The financial crisis of AD 33 happened because almost all senators, by preferring to make too many interest-bearing loans, infringed a law established by Caesar, which set the respective levels of the two forms of income. I have tried to explain this imbalance by the development of trade with India from the start of the modern era and the sheer amounts of money it required.¹¹⁰ An implication of this hypothesis, which I still maintain, is that senators would have played

¹⁰⁵ Dig. XIV. 1. The *magister navis* may be delegated *mercibus emendis vel vendendis* (XIV. 1, 3). See Aubert (1999).

¹⁰⁶ Seneca, *Ep.* 119, 1 (trans. R. Gummere); Veyne (1993: 1064, n. 2). See also pp. 135–7.

¹⁰⁷ *Ep.* 36, 5: *Ad illud aes alienum solvendum opus est negotianti navigatione prospera.*

¹⁰⁸ *CIL* IX. 60, studied by Tisè (2001). See also John Chrysostom's *1st Homily on Lazarus*, PG 48, 966, quoted by Rougé (1966: 19).

¹⁰⁹ On these two points, see pp. 137 and 176–7 with bibliography. For a different angle on the same finding, the link between agriculture and lending in general, I add Di Porto (1984a: 78 and n. 36); and, for more recent references, Andreau (1997: 268–9); Harris (2006: 8); Rathbone and Temin (2008: 383).

¹¹⁰ See pp. 186 and 246–7.

a large part in maritime loans. Money-lending was, in fact, the main way in which the richest men, in particular the senate elite, financed trade.¹¹¹

‘That the narrative of Trimalchio’s business affairs and his rise to wealth is a fairy tale goes without saying.’¹¹² Giving up agriculture for a ship, loading it, speculating on a price rise, being shipwrecked, losing everything, refusing to give up, starting again from scratch, becoming rich, eventually following Cicero’s lead by buying up land, this whole story is a variation, albeit exaggerated, on the conventional theme of the trader who makes good;¹¹³ and to see it as a reflection of reality would be rash indeed.¹¹⁴ Nevertheless, I propose to draw something from it on the following point: in the final part of the adventures of Trimalchio there are two stages, one when he is a landowner but still doing business, and the other when he ‘leaves the gaming table’: ‘I withdrew from business and began lending to freedmen.’¹¹⁵ The clear distinction between business and money-lending is at least one quite real feature of a collective mindset; and in my view this marks a difference in behaviours that was recognized. By leaving the gaming table, Trimalchio is forgoing the source of greatest profits, with its risks and initiatives; by lending to freedmen, he is entering a world of more reliable profit, which is still very substantial. Admittedly, maritime loans entail more risks than any others; but there are ways and means of evening them out, which I shall come to.

So Trimalchio is lending to his freedmen.¹¹⁶ There is nothing to suggest that this particular point might have been invented or is unrelated to real practice. In recent discussion on middlemen in the credit system, attempts have been made to assess their role, by way of drawing general conclusions on the modernity or otherwise of the Roman economy.¹¹⁷ It was immediately and properly pointed out by Verboven that these studies took no account of ‘the informal credit available to friends and family’.¹¹⁸ The word ‘family’ should be

¹¹¹ On the rehabilitation of the importance of credit in the Roman economy, see Lo Cascio (2003a).

¹¹² Veyne (2001: 156, n. 51; 1979a; cf. 2001: 41; 1961): ‘a fairy tale for business men’. For doubts about the representativity of Trimalchio, see also Garnsey (1981: 371), and Tran (2006: 125).

¹¹³ There is a different one about the trader who ends up failing, a victim of false hopes and false friends: see pp. 39–40 and 132.

¹¹⁴ On this, see Lo Cascio’s comments (2007a).

¹¹⁵ Petronius, *Sat.* LXXVI (trans. M. Heseltine; rev. E. H. Warmington): *manum de tabula; sustuli me de negotiatione et coepi liberos fenerare*. This passage is contradicted by XXXIX. 8, where the character states in the present tense *et in mari et in terra multum possideo*. By the time he was writing the later part, Petronius forgot this sentence. The contradiction confirms the fact that this is no accurate study in realism, while taking nothing away from the sociological import that I see in *manum de tabula*. Here, I depart from Lo Cascio’s reading (2007a: 9). See p. 137.

¹¹⁶ It is especially important not to amend *liberos fenerare*. See Narducci (1984: 238–9); Camodeca (1996: 98, n. 19); De Romanis (1996a: 246, n. 18; his brief comments should be read along with what I say about traders from Baetica in Chapter 2); Tran (2006: 402); Mouritsen (2011: 215, n. 41, with other references).

¹¹⁷ Temin (2004); Rathbone and Temin (2008).

¹¹⁸ Verboven (2008).

taken as *familia*, which includes slaves and freedmen. This entailed many advantages. There was no need to make enquiries or to have recourse to middlemen; there was less risk, given the contact that freedmen were supposed to keep with their former masters.¹¹⁹

Freedmen belonging to the elite were the first to benefit from loans. In this way, the lender's profit came both from the fixed interest accruing to him and, if the freedman's business was prosperous, from the share of inheritance allotted to him or to his descendants, at least in the case of the wealthiest freedmen.¹²⁰ For his part, the freedman could probably benefit from the protection of his patron or his recommendations. There is nothing in this, however, to justify confusing the issues of usury and commercial enterprises.¹²¹ Whether they made great profits or none at all, freedmen were obliged to pay the same interest. It was only when they died that their commercial success, if any, was of relevance to their patrons; and the latter had little role to play either in success or in failure. The apportioning of *peculia* to slaves reflected the same outlook.

Particularly instructive is the case of the freedmen called Junian Latins—that is, slaves who were freed informally before the age of 30. They lived as freedmen but died as slaves and were totally debarred from bequeathing their property, which reverted to their former master or his descendants.¹²² Among the measures taken by the emperor Claudius to improve the provisioning of Rome was the extending to Junians of citizenship under the law of the Quirites, on condition that they had built a boat of at least 10,000 *modii* and had transported grain to Rome for six years.¹²³ This measure makes sense only if three factors applied: that there were many Junians engaged in seagoing trade;¹²⁴ that they were free to make their own choices; and that they could acquire the funds necessary to build a boat.¹²⁵

The status of the Junian Latins was doubly advantageous for their former masters. On the one hand, Junians were covered by the *jus commercii* which enshrined their legal right, under the aegis of the *praetor*, to possess, buy, sell, and sign contracts with private parties and with the state. In this way, they

¹¹⁹ The importance of lending to freedmen was aptly stressed by Pavis d'Escurac (1977: 353–4). Mouritsen (2011) devotes only a few lines to it, in a section where he discusses the role of freedmen as deputies, *procuratores et institores*.

¹²⁰ See Andreau (2002: 236–7).

¹²¹ Similar caution has been counselled, several times, by Jean Andreau (e.g. 1996: 291) and Nicolas Tran (2006: 395–6, 402). See also p. 137.

¹²² It was possible to 'inherit' Junian Latins, as Pliny the Younger did, *Ep.* X. 104. See Sirks (1981, 1983); Weaver (1990, 1997); López Barja de Quiroga (1998); Andreau and Descat (2006: 247–9).

¹²³ See Ch. 12 for the legal texts.

¹²⁴ On the proportion of freedmen who were Junian Latins, which was probably quite high, see Weaver (1990).

¹²⁵ Sirks (1983) believes that more often than not they would have borrowed from their patrons; but Andreau (1997: 27 (1985a)) comments that we know of no instances of patrons renewing loans to their freedmen after the initial advance.

isolated their patron from their commercial activities, better than was the case with informal freedmen or slaves granted a *peculium*. This obviated the risk of an *actio de peculio* or a court case to determine whether or not the master's will had been instrumental in any business transaction. The patron, on the other hand, was just as certain of retrieving the property of any Junian who died as he would have been with a slave on the *peculium* system, and much more so than in the case of a freedman granted citizenship. A status that was particularly advantageous for masters contributed to the success of a category of individuals to whom it was even more profitable to lend money than to others.

Sirks, who has examined the matter most thoroughly, and whose findings I have just summarized, believes that the *lex Junia*, which created the category in 17 BC, was expressly designed for that purpose, after Augustus' wish better to control manumissions made it more difficult to use informal freedmen: 'The incomes out of [Junian Latins] like out of other freedmen (and freed women) will have been considerable on the whole.'¹²⁶

Cato Invents Collective Loans

It now remains to examine the text most often quoted as an example of a greedy senator engaged in maritime trade: Plutarch's description of Cato's activities at the end of his life.¹²⁷ Cato had come to believe that there were forms of income that were more reliable and less subject to the vagaries of climate than those to be derived from agriculture in the strict sense. As an owner of lands, he rethought his priorities by buying up woodlands, pastures, pitch workings, and lands used by fullers, as well as ponds and hot springs. And, in addition to that, he started making loans to maritime traders.

There have been very diverse interpretations of the following lines, for they consist of two elements that can appear to be mutually contradictory. At the outset, Plutarch makes it plain that he is dealing with maritime lending,¹²⁸ before going on to stress the originality of the procedure demanded by Cato: borrowers should form a collective by bringing together enough collaborators to provide fifty traders and fifty boats. Cato himself had a share in the company via his freedman Quintio, who sailed and traded with the others. Despite the phrase *διὰ Κοινῶντος*, there is no evidence to suggest that any care was being taken to keep things hushed up; the detail of the undertaking, plus the names of the participants, came down without impediment to Plutarch.

The sole object of the enterprise, seen in its context, which was the desire for income without risks, must have been to obviate the hazards entailed in bottomry. Cato's single share in the endeavour, even if the percentage that it

¹²⁶ Sirks (1981: 274).

¹²⁷ *Cato ma.* XXI. 5–6 (349 b–c).

¹²⁸ *Pace De Martino* (1979: i. 133).

represents is not stated, seems to have been quite minimal. It was not from this arrangement that the profits would flow, but from the interest on the loans. By distributing loans over a large number of ships, Cato evened out the risks from an accident at sea. His ploy was that he did not bother to find fifty borrowers; he transferred that responsibility to the smaller number of initial candidates seeking a loan. It was for them to set up a company that would spread the risks entailed in seagoing among a greater number. As Dominic Rathbone very aptly puts it: 'It is this lending to the group, rather than to individual *socii*, which Plutarch presents, rightly or wrongly, as Cato's novelty.'¹²⁹

This stratagem did not just decrease the risks from the sea; it also guarded against any that might derive from the dishonesty of borrowers. Built into collective lending, which is the basis of the modern phenomenon of microcredit, is the joint responsibility of borrowers. Self-selection starts to operate as soon as a group is formed. This type of loan puts social pressure on each member, which hampers any attempt at barratry or welshing. Quintio's share had the same objective, since his position was that of a participating observer on behalf of Cato. That was how Dominic Rathbone, and Jean Rougé before him, interpreted this taking of a share in the company: 'As for the presence of Quintio, it is an example of the well-established custom of having a representative of the lender keep an eye on the loan, his role being to be satisfied that the terms of the contract are observed.'¹³⁰ This cannot be seen as the emblematic example of how a senator, as a sharer in the profits and losses, had himself included in a commercial collective via the intermediary of his freedman.¹³¹

CONCLUSION

Landed proprietors exploited their estates to their full value. If there were local outlets, they sold not only their wheat, oil, wine, fowls, and other livestock, but also their honey, flowers, fish, peacocks, snails, dormice, and wild boars. They had inns built, and brothels, as well as workshops for weavers and fullers.¹³² They made a profit from people seeking thermal treatments, and they sold

¹²⁹ Rathbone (2003: 214).

¹³⁰ Rougé (1966: 427; 1980: 293). Unfortunately, Jean Rougé's interpretation is marred by his translation of *κοινωνία* as *convoi* ('convoy').

¹³¹ Such sleeping partnerships did, however, exist: Gaius, *Inst.* III. 149. Andreau (1997: 36–7 (1985a)); Bang (2008: 275–6). The collectives set up by Crassus with his slaves, freedmen, and customers are cited by Cicero (*Paradoxa*, VI. 46) as being on a par with banditry in the countryside, proscriptions of rich citizens, and massacres in the *municipia*, i.e. not just improper, but criminal. In a later section, I shall deal with companies established by a trader of Baetica with one or more of his freedmen.

¹³² On the *ergasteria* in the districts of Ephesus and Magnesia on the Meander, see Pleket (1984: 28–30).

mineral water. They sold sand, lime, stones, and the products from their pottery workshops, pots, bricks, tiles, and amphorae. They rented out the shops and buildings that they owned in town.¹³³ But for them to participate in long-distance commerce was very much the exception.

The theory that many took part in it covertly, concealed behind their slaves or freedmen, stands on no solid evidence. Scholars who maintain this theory use it as proof that secrecy was well observed, making it a hypothesis that is unquestionable, in the strict sense of the word. Yet what is shown by the few examples that we have is that any veil held in front of masters and patrons by slaves and freedmen was a transparent one. In the tablets of the Sulpicii, when one of the moneylenders whom I have mentioned is identified as a slave of Lollia Saturnina, or, even more to the point, when another slave describes himself as a *vicarius* of Amarantus *Ti. Claudii Caesaris Augusti Germanici servus*, giving Claudius his full title, the impression given is that they are showing off, revelling in the elevated status of their owners.¹³⁴ Any partners in the enterprise knew instantly whom they were dealing with. Similarly, Euxinus, a slave *negotiator*, had it spelled out on his tombstone that he belonged to one Volusius Saturninus, without masking the famous name and *gens* of his master.¹³⁵

The fact of the matter is that dependants were used as seedbeds for businesses to which advances of start-up capital were made. The subsequent development or failure of such enterprises was usually independent of the original financiers, who had no further role to play in the operations or even in the making of strategic choices. Most of these enterprises could not be bequeathed to direct heirs. This set a time limit on their activity, the more so since life expectancy was short. By their financing of trade, rich landowners taxed it for their own profit; and the rates they charged were lucrative. In this way, they made sure of having a large income, subject to less risk and fewer constraints. And any traders whose success was durable enough to enable them to get out of debt and then set up much more lasting enterprises had no hesitation in combining both sources of income, as we shall see in the next chapter.¹³⁶

¹³³ Wallace-Hadrill (1991). See also pp. 168–9.

¹³⁴ *TPSulp.* 73; 94.

¹³⁵ *CIL* VI. 9653; Pavis d'Escurac (1977: 347).

¹³⁶ For an analogous finding on banking, see Andreau (1997: 25–6 (1985a)).

Traders' Fortunes

SENECA AND CORNELIUS SENECIO

In the late summer of AD 64, Seneca informed Lucilius of the death of Cornelius Senecio, struck down overnight by a completely unexpected heart attack. Cornelius Senecio was close to Seneca and knew Lucilius slightly. Having risen from lowly beginnings to become a brilliant member of the equestrian order, he had been on the verge of acquiring true wealth (*divitiis imminebat*): 'he who was venturing investments by land and sea,¹ who had also taken contracts for tax-farming and left no source of profit untried.'² He died at the very moment when his business affairs were prospering and money was flowing into his coffers. It appears plausible that he had been engaging in maritime trading, the *fenus nauticum*, and financial activities, before expanding his interests to tax-farming, which no man could have aspired to who was not already on a sound financial footing. He had had to choose ways of acquiring wealth; and he had no doubt asked himself the question posed by Seneca in the letter (119) quoted in Chapter 1 (n. 104): 'On what stretch of water shall I embark for the purposes of trade? What state revenues shall I handle? What goods shall I bring in?' (trans. E. Minchin)

With Senecio as his starting point, Seneca speaks of the fragility of life, then broadens his subject, and a few lines further on gives another example, this one abstract: 'What madness it is to plot out far-reaching hopes! To say: I will buy and build, loan and call in interest, win public office...' (trans. R. Gummere, adapted).³ In this new example, Seneca is no longer thinking

¹ Notice how close this is to Trimalchio's statement (*Sat.* XXXIX. 8): *et in mari et in terra multum possideo*.

² *Ep.* 101, 1–4 (trans. E. Minchin, modified). Cf. Demougin (1992: 466–7); Veyne (1993: 986–7; 2001: p. xxxi; 2005: 146); Andraeu (1999a: 280–1). Though in the main I share the views stated in this last article, I cannot accept the author's parallels between Crassus and Senecio: Crassus did not rise from lowly beginnings (*ex tenui principio*), indeed quite the opposite; and Cicero judged his ways of achieving wealth as criminal, which was far from the case with Senecio.

³ *O quanta dementia est spes longa inchoantium: emam, aedificabo, credam, exigam, honores geram...*

of Senecio's business affairs, of trade, or of tax-farming. What now comes naturally to his mind is what is happening in his own circle and what he himself has done.⁴ The description is of another mode of activity, a different way of being rich and acquiring further wealth: there has to be an initial inheritance, which one can improve on and increase; one's land holdings can be extended; one builds or buys tenement blocks; and profits are uncompromisingly drawn from money lent. This is the difference between *rem augere* and *rem quaerere*, improving one's fortune or establishing it. If a man aspired to the magistracy at any level, it was best to be in the first category.

On the morning before his death, Senecio had, as was his wont, visited Seneca. He was one of those who paid the daily morning call on the senator, either as one of his clients or, if such a word seems inappropriate for a member of the equestrian order, because his relationship with him was, like theirs, imbued with gratitude and deference.⁵ Seneca had obviously given him a helping hand at the outset of his career, partly by lending him money; and it was no doubt Seneca's support that had enabled him to become an *eques*. At the very highest level, with one of the greatest and wealthiest personages in the Empire, on the one hand, and a *splendidissimus eques romanus*, on the other, the duo Seneca–Cornelius Senecio can stand as a model of relations between the political elite and businessmen-cum-traders.

THOSE WHO ARE TRYING TO MAKE THEIR FORTUNE HONOURABLY, VIA TRADE

Cornelius Senecio had been one of those *qui honeste rem quaerunt* who, because their initial assets had been insufficient, were attempting to achieve wealth honourably.⁶ Cicero defines these men as a set category by the meaning of the verb *quaerere* as used in that sentence from the *Paradoxa stoicorum*. The same meaning can be seen in the *Pro Rabirio postumo*.⁷ Rabirius would have had no reason to conceal his wealth, even if he had acquired it through his own fortune-seeking efforts (*si quaesisset*); but that was not the case, since he had come into it via two fine inheritances. Like Cicero, Seneca uses the noun *quaesitum* in this same sense: *eos quibus opus est quaesito*, those who need to make efforts to become rich.⁸ To this I would add a series of funerary

⁴ Seneca's fortune, when he detailed it to Nero, from whom he was requesting permission to retire, consisted of gardens, suburban villas, vast lands, and interest-bearing capital invested everywhere (Tacitus, *Ann.* XIV. 53: *hortos exstruit et per haec suburbana incedit, et tantis agrorum spatiis, tam lato faenore exuberat*).

⁵ Saller (1982: 129); Veyne (1993: 987, n 1).

⁶ Cicero, *Paradoxa Stoicorum* VI. 46.

⁷ XIV. 38. ⁸ *Quaest. Nat.* IV, pr. 7.

inscriptions found mainly in northern Italy, central to which is the form of words *quaerere cessavi numquam nec perdere desii*, 'I have never ceased seeking to win my fortune and I have never stopped losing it'.⁹ Rather than seeing these, as they are generally seen, as an unusual image of the ups and downs of a life in trade, a life that was a sequence of successes and failures, to my mind they are part and parcel of the *topos* of the unfortunate trader,¹⁰ who, by being born under an unlucky star, fails in all his undertakings.

In the *Paradoxa stoicorum*,¹¹ Cicero sets forth the types of business in which such men may engage with honour: trade; supplying a labour force for public works; and tendering for public contracts. It is one of the most hackneyed clichés that trade is an unavoidable stage that men who were not born rich but want to become rich must go through.¹² Tendering for public contracts, something that Cornelius Senecio was getting into at the end of his life, was the culmination of this endeavour, if it led to the most successful outcome. The fact was that a man must already have at his command great financial support if he was to advance the state the sum that would later give him the right to gather tax and draw private profit from it. Cornelius Senecio had become one of what Jean Andreau calls *affairistes* (let's call them entrepreneurs), to distinguish such men from aristocratic financiers and in general from leading citizens.¹³ This distinction was quite clear to Seneca and no doubt also to jurists. Labeo's passage on the delegation of slaves, already quoted,¹⁴ fits perfectly with such men, but cannot refer to the fortunes of senators, since it mentions tendering for public contracts. These entrepreneurs needed many agents to support or represent them, some to invest money, look after their commercial endeavours, and take part in public tendering and its consequences, and others to take charge of their agricultural enterprises. The point is that, given the amount of wealth that Senecio now commanded, he must also have been a landowner. He just did not see the working of his estate as the core of his activities; nothing of that is implied in Seneca's sentence. It was a secondary aspect of his fortune.¹⁵

It is commonly assumed that, once they had become rich, traders withdrew from business, adopting the lifestyle and relying on the sources of income of

⁹ Buonopane (2002). See CLE 1090–1095 and Gabucci and Mennella (2003). Nicolas Tran kindly directed me to these references.

¹⁰ See p. 132.

¹¹ VI. 46: *Qui honeste rem quaerunt mercaturis faciendis, operis dandis, publicis sumendis, intellegimus opus esse quaesito*... This is the same usage of the rare sense of *quaesitum* in the same form of words in Seneca, *Quaest. Nat.* IV, pr. 7.

¹² See Ch. 6.

¹³ Andreau (1997: 47–74 (1982: 3–45); see also 1985a; 1999a; 2001: chs 4, 6).

¹⁴ See Ch. 1, n. 83.

¹⁵ Di Porto (1984b), who gives a close and detailed reading of the passage from Labeo, manages to wrongfoot himself by assuming that the estate is the main thing. Cf. France (2004); Verboven (2004), and Andreau (2007a: 238–9) on Atticus.

the leading citizens. In this way, they achieved the status of honourable men and could even aspire to being accepted by the political elite, or at least to seeing their descendants become part of it. And there is indisputable epigraphical evidence to support this view, one of the most eloquent and best-known examples being from Pompeii, where the 6-year-old son of N. Popidius Ampliatus was made a decurion because his father had financed the rebuilding of a temple after the earthquake of AD 62.¹⁶ This was the trajectory of Trimalchio, who might have continued his social ascent had not Petronius made him a comic character, vain, ignorant, and uncouth. In real life, during the late Republic, the rise of Cluvius, the businessman from Puteoli, must have been similar: he ended up as a landed proprietor after having engaged in trade.¹⁷ This is consistent with Cicero's recommendation in the passage from *De officiis* noted in Chapter 1 (p. 22): the trader becomes praiseworthy when, sated with riches, or rather content now to live on those he has accumulated, he forsakes the harbour and devotes himself to agriculture.¹⁸ Petronius' fiction and Cicero's sentence, often taken together and taken for granted, are the evidence used to argue that this behaviour was widespread.¹⁹ Yet it would be very difficult to define the level of wealth that makes for satiety or contentment. In Seneca's view, Cornelius Senecio was still only on the verge of genuine wealth. After initial difficulties, he was in a phase where everything he touched turned to success; and one may wonder where he would have called a halt. On that, our mythic Trimalchio, with his caricature of a fortune, can tell us nothing.

Cicero sees the urge to accumulate a fortune and to increase it as perfectly legitimate: helping one's friends *vel in re quarendam vel augendam* is in accordance with the most praiseworthy generosity.²⁰ Seneca, in speaking of Senecio, expresses high regard or even admiration for the talents to which he owed his success.²¹ The money with which he was deluged towards the end of his life is a positive sign.²² Nor is there the slightest hint of contempt in Cicero's definition of those *qui honeste rem quaerunt mercaturis faciendis*. What he does reproach Crassus for, in the same text, is, first, that he does the same thing even though he is a senator and extremely rich by birthright, and,

¹⁶ *CIL* X. 846 = *ILS* 6367; cf. Jacques and Scheid (1990: 341). There is another fine example in Buecheler, 83 (*CIL* IX. 2128); cf. Veyne (2001: XXVIII, n. 7). See Schleich (1984: 64 and bibliography n. 257).

¹⁷ Andreau (1997: 113–15 (1983)).

¹⁸ *Off.* I. 151.

¹⁹ Recently, even Verboven (2007a) has come to this same conclusion at the end of an article that, in its earlier pages, actually provides many grounds for doubt on the matter; and Peter Bang too (2008: 152–3, n. 71).

²⁰ *Off.* II. 55.

²¹ Cf. Verboven (2004: 192–3), for an apt reminder of Cato's praise of traders, *Agr. Praef.*, on which see Verboven (2004: 218, n. 58).

²² The stoic's deploring of wealth, in philosophical contexts, should not be extrapolated to real social life (e.g. *Ep.* 88, 22.).

secondly and especially, because he also goes in for all sorts of practices that are strictly illicit. Cicero's form of words should really be read in the light of the opening of Cato's *De agricultura*: 'It is sometimes to distinguish oneself that one obtains money by trade' (*Est interdum praestare mercaturis rem quaerere*).²³

So this letter of Seneca's raises several questions. How far can traders and entrepreneurs go in their pursuit of *rem augere*? Ultimately, is every trade-derived fortune bound to be transformed into a land-based one? Or is it sometimes possible for the development of a trade-based fortune to be on-going? What position, leaving aside stereotypes, can traders and entrepreneurs expect to occupy in the society of the Empire? How many rungs separate those who engage only in trade from others, like Cornelius Senecio, who combine it with other means of gaining wealth? A few examples from different regions will show that circumstances varied widely from place to place and that there was a great diversity of types of trading and of individuals who traded.²⁴

BETWEEN PUTEOLI AND THE RED SEA

P. Annius Plocamus

Trade with the East provides a second example of how to rise in society eventually to the level of tax-farming, though this one is spread over several generations.²⁵ By road from *Coptos* to *Berenice*, between the Nile and the Red Sea, across the eastern Egyptian desert, caravans took twelve days to reach the sea. This trek was punctuated by bivouacs near wells if there were any, or *mansiones in monte*, stops in the open desert, where there were none. On the way from *Coptos*, between the first two wells,²⁶ a rock-shelter in the side of the Wadi Menih, opposite the mouth of the Wadi Menih El-Her, gave a little shade; this was the first *mansio in monte*.²⁷ An image of the god Min makes

²³ Verboven (2004: 192–3) had already made the connection between Cato's judgement and Seneca's on Cornelius Senecio; see also Giardina (2002a: 329–30 (Giardina and Gurevič, 1994: 24)).

²⁴ On the first question, these examples will complement the answer given by Verboven (2004: 182–7), for the Republican era, showing a series of entrepreneurial equestrians either uninterested in qualifying for entry to the Senate or postponing it for long periods. Verboven's examples are generally cogent, though to my mind he makes less distinction than he should between loans and business. See also Andreau (1978; 1997: 3–45 (1985a)).

²⁵ For all this section, see De Romanis (1993).

²⁶ As explained by Pliny, VI. 102–3. They are *Phoinikôn*, which is a small oasis, and *Compasi*.

²⁷ De Romanis (1996a: 203–9); Cuvigny (2003); Brun (2008).

the little grotto a site sacred to Pan (*paneion*). The cliffs are covered in inscriptions, composed of names or tokens of worship. One inscription appears twice, in Greek and Latin; it says that, in early July of the year AD 6, Lysas, a slave of P. Annius Plocamus, arrived there.²⁸ The date is appropriate for someone who was going to take ship for India at the favourable season indicated by Pliny the Elder.²⁹ P. Annius Plocamus was no doubt sending his agent Lysas across the Red Sea and the Sea of Oman to negotiate purchases of pearls, beryls, pepper, ivory, malabathrum (Malabar leaf), silk from China, and other precious goods.

That the Annii Plocami hailed from Puteoli is indicated by a stone inscription found near there. It makes mention of a P. Annius Eros, a freedman of Plocamus.³⁰ Eros was careful to spell out the *cognomen* of his master, because the Annii Plocami were known and distinguishable from the other Annii. To me they look like a branch, of freedman origin, of the *gens Annia* of Puteoli, who were a great family celebrated for having built the basilica of the Augustan forum and who could boast a *duumvir* under Tiberius and decurions in the second century AD. This does not necessarily mean that Lysas' master was a freedman; he might have been a descendant of some earlier freedman.

Pliny the Elder tells us that, during the reign of Claudius, that is some forty years later, the Romans discovered Ceylon (Taprobane Island) thanks to a freedman of one Annius Plocamus. Sailing along the coast of Arabia, he was blown off course and ended up a fortnight later at Taprobane, where he was welcomed with every kindness and hospitality. His patron was known to Pliny because he had farmed from the treasury the revenues arising from the Red Sea taxes.³¹ Could this tax farmer be the same man who was the master of Lysas? Late in life, having followed the same trajectory as Cornelius Senecio, he would have eventually combined tendering for public contracts (in these cases, involving huge sums) and trading via the Red Sea and the Sea of Oman. For there is every likelihood either that the freedman travelling round Arabia was acting as a delegate for his patron or, if he was acting on his own account, that the enterprise was funded by a loan from the patron. However, though it is almost certain that there is a link between these two Annii Plocami, the time difference suggests that the tax farmer was the son, if not the grandson, of the first one. The acquisition of the status and the fortune of the Annius Plocamus of the mid-first century AD must have been achieved over several generations of a trading dynasty. Whatever the activities of the *gens Annia* were,³² the

²⁸ De Romanis (1996a: 211, no. 5); Cuvigny and Bülow-Jacobsen (1999: nos 2, 3).

²⁹ Pliny, VI. 104. See De Romanis (1996a: 211–12, 247–50).

³⁰ CIL X. 2389; Camodeca (1979: 24–5, fig. 1).

³¹ Pliny, VI. 24.

³² In Cicero's *In Verrem*, a M. Annii is a personage of great importance in Syracuse, a Roman knight (Cicero, *Verr.* II.v.73–4; 156. However, Cicero says nothing of his city or his livelihood, though he is at times described as *negotiator*, and it is tempting, by analogy with the

Annii Plocami had won their autonomy.³³ The Red Sea tax farmer had a versatile range of activities and was served by a large network of agents. His tendering for public contracts is the mark of a man who, like Cornelius Senecio, has climbed to a higher condition. Forty years on, it was the culmination of the expansion of the first P. Annii Plocamus' business.

Calpurnius Moschas and the Calpurnii

About ten years before Lysas, on 27 October 4 BC, Laudanes, a slave of Calpurnius Moschas, had written his name on a wall of the grotto, but only in Greek.³⁴ The road from *Coptos* to Berenice had not long been made; and he was one of the first to use it. It seems highly probable that Calpurnius Moschas was a freedman of the Calpurnii of Puteoli.

At about the same time, the Capitoline Temple at Puteoli was entirely rebuilt in solid marble, which made it a structure of exceptional quality, the work of the architect L. Cocceius Auctus, without parallel except in Rome itself.³⁵ It was dedicated and offered by one L. Calpurnius. The inscription, which has suffered great damage and is known only from ancient copies,³⁶ tells us nothing more about this man, who belonged to one of the oldest families in Puteoli and was clearly at that time one of its wealthiest citizens. Castagnoli suggested a restoration of the text, which would have made him a *duumvir* of the colony. This reading has been widely accepted, except by Mireille Cébeillac; her interpretation is that he was a grand *euergetes* without a political role. This would mean he belonged to an elite of money, grown wealthy through commercial relations with the East, but excluded from the colony's governing organs, as were two *euergetai* of *Minerva Scolacium* in Calabria, whose dedications make no mention of any municipal functions.³⁷

The fact is, it is just as widely accepted that the fortune of the Calpurnii was commercial in origin.³⁸ And L. Calpurnius (in the fuller form L. Calpurnius Capitolinus, in honour of the construction of the Capitoline Temple), along with his brother C. Calpurnius, does figure in another inscription, which

others, to see him as a citizen of Puteoli (Camodeca 1979). This could prove that the involvement of the *gens Annia* in trade was of long standing.

³³ The names of other Annii Plocami appear in Rome, in the late first century and during the second, on a lead pipe and a tile. From its remote slave origins, the branch had spread. On the Annii Plocami, see Camodeca (1979); De Romanis (1988: 18–19, n. 30; 1993: 70–1; 1996a: 247–50); Bonsangue (2001).

³⁴ De Romanis (1996a: 211, no. 2); Cuvigny and Bülow-Jacobsen (1999: no. 1).

³⁵ Zevi and Cavalieri Manasse (2005).

³⁶ CIL X. 1613; Palombi (2002).

³⁷ Cébeillac-Gervasoni (2003: 544–5).

³⁸ The idea is found as long ago as Dubois (1907: 44): 'a great family of traders'; also in Rougé (1966), 279 '*negotiatores* well known in the city'.

says that the 'traders who do their business [*mercatores qui negotiantur*] at Alexandria, in Asia, and in Syria' dedicate to them two statues in the forum.³⁹ So their links with the Eastern trade are beyond doubt, though nothing is known for certain about their status.

As Fausto Zevi has pointed out, among donor traders we should first and foremost include freedmen of the Calpurnii themselves,⁴⁰ and perhaps also (why not?) Moschas from the Wadi Menih. However, dedication of statues is not something one associates with strictly dependent freedmen. The suggestion has been made by Jean Andreau and Federico De Romanis that we are dealing with a sleeping partnership.⁴¹ Fausto Zevi accepts that these freedmen must have been entrepreneurs in their own right, the Calpurnii having an interest in the business. The inscription stresses the debt of gratitude acknowledged towards the Calpurnii by the group of traders, which presumably did not exclusively comprise freedmen from a single family. That, too, presupposes a sufficient degree of autonomy.

There is no other document that specifies the activities of the Calpurnii or the origin of their fortune;⁴² but there can be little doubt that such a spectacular act of euergetism as the construction of the Capitoline Temple was the outcome of the commercial energy generated in Puteoli at the start of Augustus' reign and made possible by the extraordinary profits from trade with the East. One can nevertheless pose again the question raised by Mireille Cébeillac on the status of L. Calpurnius Capitolinus, whether he really was the head of a network of commercial enterprises, just as we can also ask the opposite one about his exact activities, if we assume that he really was a *duumvir*. I shall revert to these matters shortly.

By the second century BC, men of Puteoli were playing an outstanding part in trade with the eastern Mediterranean. A Serapaeum dating from that period is a sign that there were relations with Alexandria, where worship of Serapis was particularly popular. And, by the middle of the first century BC, there was a Nabataean community in Puteoli who built a sanctuary to their national deity Dusares.⁴³

During the trial of Verres, Cicero says that 'all the people of Puteoli are here in a body; their wealthy and respected merchants have come in great numbers to attend this trial' (trans. L. H. G. Greenwood), for their associates and freedmen were victims of Verres' crimes and looting. Their ships from the

³⁹ *CIL*, X, 1797. See Palombi (2002); Zevi, in (2008b: 247).

⁴⁰ Zevi and Cavalieri Manasse (2005: 272); Zevi and Valeri (2008: 446–7).

⁴¹ Andreau (1997: 37, n. 70 (1985a)) (he had entertained other possibilities in 1980: 914–15); De Romanis (1993: 69).

⁴² Apart from the inscriptions quoted, the only mention from which anything about the Calpurnii can be drawn is that of a *regio vici Vestoriani et Calpurniani* (Camodeca 1977: 73–4). A Calpurnius Pistus was a decurion in AD 187 (*CIL* X. 1784).

⁴³ De Romanis (1993: 64–5); Zevi (2008a).

eastern Mediterranean would call at Sicily; and the crews were obviously among those who, as Cicero says, attempted to counter the charge of having fought alongside Sertorius by showing the infamous governor their merchandise from the East, in the hope of proving they were not from Spain, a tactic that was their undoing, as the goods were of great value.⁴⁴ I have already mentioned P. Granius, the trader from Puteoli whose boat with its load of merchandise was taken and his freedmen killed by Verres (see Ch. 1, p. 31). Nineteen Granii appear on Delos,⁴⁵ and others in different ports of the eastern Mediterranean. Members of the same *gens* were magistrates in Puteoli during the second and first centuries BC.⁴⁶

The traders from Puteoli were thus well prepared to contribute to the explosion of trade with India and Arabia set off by the conquest of Egypt by Augustus and reaching its peak about the start of the common era.⁴⁷ They were accompanied by other men from Campania.

C. Numidius Eros and Γάιος Μουνάτιος

The only trader who we know for certain went to India was C. Numidius Eros: in 2 BC he wrote his name twice in Latin on the wall of the *paneion*, the temple of Pan, at Wadi Menih, stating that he was returning from India.⁴⁸ He was accompanied, or perhaps followed, by his slave Thaliarcus, who engraved his own name.⁴⁹ Numidius Eros was a freedman of a *gens* from Campania, probably from Capua. His is the only *graffito* that is all in Latin; he must have had little familiarity with Greek and probably lived in Italy. And presumably he had been present at each and every stage of the long trek. Here we have a trader who was full of courage and energy, a man of many adventures, blazing a new trail: *impiger extremos curris mercator ad Indos*, 'Ardent trader that you are, you rush to the furthest Indies' (trans. H. R. Fairclough, adapted), as Horace said.⁵⁰

Among the new names deciphered by Federico De Romanis in the *paneion*, one written in Greek, that of C. Munatius, has been of particular interest to him.⁵¹ He suggests that this man is the C. Munatius Faustus who was

⁴⁴ Verr. II.v.154 and 146. See p. 7, n. 26.

⁴⁵ Ferrary, Hasenohr, and Le Dinahet (2002: 198–9).

⁴⁶ On all of this, and for much other evidence that is just as convincing, see De Romanis (1993; 1996a: 157–66); Cébeillac-Gervasoni (2002); Zevi (2008a).

⁴⁷ See Ch. 14, and De Romanis (1996a), 200–3.

⁴⁸ C. Numidius Eros hic fuit anno XXIIIX Caesaris exs India redie(n)s menos pamen(oth) (= late February or March AD 2 by our count).

⁴⁹ De Romanis (1996a: 211, no. 3); Cuvigny and Bülow-Jacobsen (1999: nos 5 and 6).

⁵⁰ Ep. I. 1, 45. See De Romanis (1996a: 243–6) for a detailed coverage of all the possible hypotheses advanced about his status.

⁵¹ De Romanis (1996a: 214, no. 12 and 254–7); Cuvigny and Bülow-Jacobsen (1999: no. 10).

honoured by his wife Naevoleia Tyche with the famous tomb, or rather cenotaph, at the Herculaneum Gate at Pompeii, which dates from the time of Nero. C. Munatius Faustus was a freedman, *augustalis* and honoured by decree of the decurions with a seat of honour at the theatre, a *bisellium*; in short, one of the most distinguished freedmen in Pompeii. On the tomb, the origin of his fortune is shown in a bas-relief of a great trading ship. He gloried as much as Trimalchio in his social position, which was the highest possible within the limits set for freedmen.⁵² But the two contrasting images can just as well be set side by side: a negative one and a positive one of the freedman who has achieved wealth through trade. Munatius won the high regard of the local elite. And, as is shown by the bas-relief on the cenotaph, people close to him did not deplore his status as navigator and trader.

The token of worship that he left in the Wadi Menih, if we are in fact dealing with the same individual, sums up his career better than the bas-relief of the great ship. As an apparently independent freedman, he personally ventured across the eastern Egyptian desert and may even have made it to India, winning the fortune that enabled him to make the generous allocations (*sportulae*) that also figure on the monument and earned him his popularity.

C. Peticius

With the name of C. Peticius, engraved twice, once in Greek, once in Latin, on a wall in another *paneion*, this one on the road to *Myos Hormos*, we are going to leave aside Puteoli and Campania for a time in order to examine other matters.⁵³ The inscription dates very likely from the reign of Tiberius. P. A. Gianfrotta has included this Peticius in a commercial dynasty whose earliest representative known to us is the Peticius who was the master of a great grain ship that took Pompey aboard in 48 BC, when he had reached the sea after his wretched flight from Pharsalus.⁵⁴ A wine amphora from the first half of the reign of Augustus, discovered in Carthage, bears the name of a C. Peticius. He was a wine dealer. About the middle of the first century AD, some 100 years after Pharsalus, a Peticius Marsus engraved his name on one of the *dolia* found in the Diano Marina wreck, which had probably contained wine from Hispania Tarraconensis; so he too was a wine-dealer. As Gianfrotta has demonstrated, this latter wine dealer can be assumed to be the M. Attius Peticius Marsus who dedicated a fine bronze statuette, a replica of the Farnese Hercules, in the temple of Hercules *Curinus* at Sulmona. Also preserved at the museum of Chieti is a bas-relief from a funerary monument representing a camel laden with amphorae. By comparing it with the Peticius known to us

⁵² CIL X. 1030 = ILS 6373; Kockel (1983: 100–9); Adamo Muscettola (1992: 109–11).

⁵³ See Ch. 13.

⁵⁴ Plutarch, *Pomp.* LXXIII. 3, 6.

from the Wadi Hammamat, I have concluded that the monument belonged to the Peticii family and that they had participated in the India trade.⁵⁵

There can be no doubt that, for at least a century, the Peticii were an important trading dynasty, involved in long-distance commerce, though with strong roots in the regions of the Paelignians and the Marsi, on the Adriatic versant of Italy. The first Peticus was active in the grain trade, the later ones in wine. I would no longer assert, as I once did, that they were also importers of eastern merchandise in exchange for wine. That would have meant that the range and extent of their interests were vast. But we may assume that, alongside traders who took on all trade from Italy to India and back, there would have been other networks of lesser scope. The Peticii of the time of Augustus and Tiberius may have been content to supply traders who were based at *Myos Hormos* and specialized in commerce with the East, with the wine that served occasionally (much less often than *denarii*⁵⁶) as currency for the purchase of some of the precious stones and pepper brought back to Italy.

The Most Lucrative Routes

The sea route between Alexandria and Puteoli was the most important in the Roman world, first because of the tonnage of Egyptian grain bound for Rome but even more so because of the movements of money required by the luxury products from the Eastern trade. 'I have seen Lollia Paulina, who became the consort of Gaius... covered with emeralds and pearls interlaced alternately and shining all over her head, hair, ears, neck and fingers, the sum total amounting to the value of 40,000,000 sesterces...' (trans. H. Rackham).⁵⁷ All this had come from India; and the sum is consistent with figures already quoted.⁵⁸

The profits from this trade were bound to have been substantial, despite the catastrophes that must have happened but that have left no trace in the historical record. In the last years of the first century BC, the traders of Puteoli engaged in a sort of gold rush, which we can glimpse through the inscriptions left in the eastern Egyptian desert. This required the setting-up of an extremely complex organization, involving a great number of highly diverse people, some of whom were to become very rich, with bases at Puteoli itself, in Alexandria, *Coptos*, the Red Sea ports, at *Muziris* on the Malabar coast (where traders built a temple to Augustus), and as far away as Arikamedu in

⁵⁵ See Ch. 13; De Romanis (1996a: 250–1); Gianfrotta (1989; 1998: 108).

⁵⁶ See pp. 235–48. The *Periplus of the Erythraean Sea* mentions seven ports where wine can be exported, but specifies in the case of five of them that it was in small quantities (*οὐ πολὺς*).

⁵⁷ Pliny, IX. 117.

⁵⁸ See Introduction, pp. 7–9.

the Bay of Bengal. A similar set of contacts must have linked Puteoli with Palmyra and Petra.

Those who constituted this organization were traders, whom we have glimpsed here and there. Many of those who actually undertook the voyages seem to have been freedmen. In the background were financiers who, though they presumably did not engage directly in the commercial enterprises, supported them not just with large amounts of capital but with their influence, and kept a close eye, if not on the commercial strategies they were subject to, at least on the risks they ran. The loan contract of the *Hermapollon* in the second century (see Introduction, pp. 7–8) is revealing in this regard: it minutely details the conditions of security that must apply during the crossing of Egypt from a port on the Red Sea to Alexandria, as well as the conditions that governed taking possession of the cargo, which served as a pledge if the loan was not repaid within the agreed time limit.

The gift of the Capitoline Temple at Puteoli was to be matched by a slightly later counterpart in Alexandria. During the AD 20s or 30s, the alabarch G. Iulius Alexander, the *princeps* of the Jewish community at Alexandria, brother to Philo and father of the famous Ti. Iulius Alexander, had nine of the ten doors of the temple of Jerusalem covered in plates of gold and silver. In AD 36, as a tax farmer and financier, he gave in to the demands of Agrippa, the future king of Judea, who wanted a loan of 200,000 drachmas. Preferring, however, to encourage Agrippa, who was an incorrigible spendthrift and chronically indebted sponger, to go back to Italy, he had a small part of the sum made available at Alexandria and the balance, 170,000 *denarii*, at Puteoli.⁵⁹ Being a tax farmer, Alexander enjoyed special facilities for transferring funds. Nevertheless, this example confirms the development of organized financial movements between Egypt and Puteoli, which must have dated from the Republican era and was a necessary concomitant of the transportation of objects of value. Puteoli was where the traders, or at least those who covered the entirety of the operations as far as Italy, received the bulk of their profits. The dedication to the Calpurnii shows that traders who had set up in Alexandria, Asia, or Syria returned to Puteoli from time to time. Transfers of money were needed for investing in new voyages. Such transfers, which were effected by book entries, could pass through the hands of different intermediaries, publicans, 'financiers to the aristocracy', or members of the elites with interests or bonds of *amicitia* in the provinces.⁶⁰

The richest families of Puteoli must have participated in these financial activities, just as they must have supplied capital to the traders for their business ventures, as well as the support and recommendations necessary

⁵⁹ Flavius Josephus, *Ant. Iud.* XVIII. 159–60. See Burkhalter-Arce (1999).

⁶⁰ Andreau (1978).

for them to become established in the ports of the eastern Mediterranean.⁶¹ This is the type of service that could justify the homage to the Calpurnii from the traders operating in Syria, Asia, and Alexandria. It was also a rich source of income deriving from trade, without anyone having to engage in commercial activity. I prefer to see the Calpurnii as belonging to these financiers rather than being at the head of some enormous commercial enterprise.⁶² By the same token, the objection raised against the exercising of the duumvirate by L. Capitolinus no longer stands.

The Alabarchs

Alongside traders who seem mostly to have stuck to their bases in Italy, sending slaves to be their agents elsewhere, Greco-Egyptians and the Jews of Egypt appear to have played an important part. The names of those who can be identified are often those of great personages, for whom combining both roles was not a problem. It is not known whether the alabarch G. Iulius Alexander was active in trade; but he was certainly close enough to it to make his younger son, Marcus, a trader, while the eldest, Tiberius, was famously carving out his brilliant equestrian career. The name of Marcus figures on one of the camel-driver Nicanor's *ostraka*, which were receipts signed by agents charged with transporting provisions between *Coptos* and *Myos Hormos* for people who seem to have been manning a trading station on the Red Sea coast.⁶³ Even more revealing is the case of G. Norbanus Ptolemaios, who, in the second half of the first century AD, was second in rank in the Roman administration of Egypt, being responsible for administration of justice and looking after property of the *res privata*, and an equestrian. His name, too, appears on the *ostraka* of Nicanor; and it is stamped on an amphora stopper discovered at *Coptos*. There is also, of course, papyrus evidence of his agricultural activities in the Oxyrynchite nome. He was clearly a man who left no type of business untried.⁶⁴

⁶¹ For transactions with India, it should be added that sending silver *denarii*, the circulation of which was forbidden in Egypt and some of which were not deemed to be legal tender, was a problem that the financiers of Puteoli must have had a hand in solving. See pp. 239–40, and De Romanis, (1996b: 738–40).

⁶² Its ramifications would have to reach as far as Rome itself, and include retail trade, if we are to accept Gianfrota's recent suggestion (2008: 74–5) of a link between L. Calpurnius Antiochus, *margaritarius de sacra via* (CIL VI. 9546) and Calpurnius Moschas, the former being 'a minor player to be included in the broad commercial network' of the Calpurnii.

⁶³ Fuks (1951); Burkhalter-Arce (1999); Cuvigny (2003: 274–5).

⁶⁴ Cuvigny (1998). Another example of a trading alabarch (in this instance an imperial freedman) is supplied by two plaster amphora stoppers bearing the name of Claudius Anicetus, in Greek and Latin, with the mention *arab(archos)* in the Greek part. See Denecker and Vandorpe (2007), for a review of the evidence on the plurality of official functions and

Underlying the financial successes of those merchants who were bold enough to take the risk of participating in the Eastern trade was the enormous influx of wealth into the hands of the Roman aristocracy towards the end of the Republic, culminating with the conquest of Egypt, and the habits of conspicuous consumption that developed. The opening lines of the list in *Revelations* detail especially items that originated beyond the Red Sea.⁶⁵ The jewels of Lollia Paulina probably made the fortune of the family of Annius Plocamus and others, as well as paying for the temple *de solido marmore* on the *capitolium* of Puteoli and the gold-plated doors of the temple of Jerusalem. Traders plying that route were wagering double or quits, or taking an even greater risk. They were very likely the most adventurous and the ones who were most eager for wealth at any price. And the surest profits accrued to those who financed them.

By way of contrast with this risky trade, which satisfied the demand for luxury items, we may turn to a different one, which was just as long established, was plied along familiar routes, and dealt in a product of daily necessity: the Baetican oil trade.

PAINTED INSCRIPTIONS ON THE AMPHORAE FROM BAETICA

Five Wrecks . . .

Because they often bear, in the genitive case and in black ink at the base of the neck, the names of traders who owned cargoes during their transportation,⁶⁶ amphorae from Baetica provide evidence that is less readily available in other cases. So it is that five wrecks, which have been investigated with different degrees of thoroughness, have revealed the names of the traders who either hired out or loaded the ships.

The oldest of the wrecks was lying in shallow waters near a beach on the island of Ventotene, off the coast of Gaeta. It would appear to date from the second quarter of the first century AD. Though dispersed and much looted, the contents include twenty-five amphora fragments with inscriptions; they are mostly from amphorae that held *garum* or salted fish (Dressels 8 and 9), with a few that held oil (Dressel 20). On the former, the names, often

commercial activity in Egypt. However, the most recent interpretations of the Vienna papyrus SB XVIII 13167, by Rathbone (2000) and especially Morelli (2011), shed the clearest light to date; if the 25% customs duty was paid in kind, alabarchs such as Annius Plocamus were also the traders who sold a quarter of the goods arriving from India.

⁶⁵ See pp. 6–7.

⁶⁶ Liou and Tchernia (1994: 134–7).

incomplete, of nine different traders can be read; and on the latter, the names of two.⁶⁷

The Port-Vendres II wreck foundered on reefs between AD 41 and 48 while seeking refuge in the harbour at Port-Vendres. Although it was in a poor state of preservation, excavation of the wreck retrieved several hundred amphorae of four different types, which had contained oil, wine, reduced must (*defrutum*), and salted fish. Ingots of tin, copper, and lead were also found. And here, too, the names of eleven different traders figured on the amphorae: eight on oil amphorae, two on salted fish amphorae (Pompeii VII), and the name of Q. Uritius Revocatus on three types of amphorae, for oil, for reduced must (Haltern 70), and for wine (Dressel 28).⁶⁸ I shall come back to these.

The most recently discovered (2002) is the one at Albufereta near Alicante. It has been partially excavated and dates either from the reign of Nero or the early years of the Flavian dynasty. The only amphorae to have been brought up so far are Dressel 20s; but the cargo also included copper ingots. On the amphorae there are five different names painted. Two of them belong to associates, co-owners of their amphorae, C. Atilius Secundus and C. Iunius Eutrapelus, who were no doubt a freeborn man and a freedman, respectively. The D. Caecilii, to whom we shall soon turn our attention, figure in two forms: one D. Caecilius by himself, and a family association, the Decimi Caecilii. Altogether, the inscriptions give us five groups of amphorae belonging to five separate entities.⁶⁹

The uses to which the wreck known as 'Pecio Gandolfo', off Almería in Spain, has been put are inauspicious: first, it was looted; then the materials that could be recovered were studied more for their typology than for the painted inscriptions on them. Bernard Liou and Emilio Rodríguez Almeida did, however, come into possession of photographs of ten inscribed amphora fragments. The inscriptions also specify contents: tuna; a different fish, *colias Saxitanus*, probably of the same family; *garum*; *liquamen*; and the names of four different traders, two of which are repeated twice.⁷⁰ The typology of these amphorae dates the wreck to the end of the first century AD.

The fifth wreck was explored in the Gulf of Fos; it dates from the middle of the second century AD.⁷¹ Not very much of the cargo was found; it was heterogeneous, with wine amphorae from Gaul and a basket full of glass *unguentaria*, alongside Baetican amphorae for oil and for salted fish or fish sauces. Of the twenty-two amphora fragments with painted inscriptions, sixteen give the names of five traders: one is on an amphora presumably for *garum*, and four on oil amphorae (L. Antonius Epaphroditus, twelve times;

⁶⁷ Arata (1993, 1994)

⁶⁸ Colls et al. (1975); Liou, in Colls et al. (1977: 49–93); Colls and Lequément (1980).

⁶⁹ Fernández Izquierdo et al. (2008).

⁷⁰ Liou and Rodríguez Almeida (2000).

⁷¹ Liou and Gassend (1990: 163–219).

L. Antonius Melissus and L. Antonius Peregrinus together twice; and Q. Vinisius Serenus once). It is noteworthy that L. Antonius Epaphroditus was trading oil from two different estates, one of which, according to an inscription from Monte Testaccio, also sold its oil to Q. Vinisius Serenus. No single trader was appointed by an estate.

It can be concluded from this examination that, as a general rule, the cargoes on ships from Baetica belonged to several different traders, usually quite a lot of them. To the names found on the amphorae in the Port-Vendres II and Albufereta wrecks should be added those of the owners of the ingots of copper, lead, and tin that were also part of the cargo. The major Baetican ships wrecked, such as Sud-Lavezzi 2 and Sud-Perduto 2, were carrying both metal ingots and several types of amphorae.⁷²

The fact that one cargo was split among several different traders should not be taken to mean that this was a practice generally adopted in the sea trade. The costly Indian cargo on the *Hermapollon* seems to have had a single owner.⁷³ From the papyrus P. Bingen 77, we know the names of the owners of nine cargoes brought to Alexandria in the second century AD, only two of which are shared by two or three individuals.⁷⁴ Against that, in connection with Dressel 1 amphorae and Italian wine at the end of the Republic, Antoinette Hesnard and Piero Gianfrotta had earlier noted the 'shared chartering of ships for one voyage'.⁷⁵ The jurists Paulus and Callistratus, studying the problems of apportionment of contributions posed by the law of jettison and some particular cases of shipwreck, mention that plurality of traders was common.⁷⁶ Not that this was standard practice, but we can see strong trends in some branches of commerce and in some regions. With multiple owners of a cargo, the risks were spread more widely; and the effect was similar to that of the collective that Cato foisted upon his borrowers. This conduct was motivated by security concerns. It required numerous participants and numerous transactions.

... and 486 traders

In the most recent general survey of names painted on Baetican amphorae, Robert Étienne and Françoise Mayet counted 405 oil merchants and eighty-four traders in salted fish and fish sauces.⁷⁷ This disparity stems from the wealth of evidence from Monte Testaccio, that artificial hill made of fragments

⁷² Liou and Domergue (1990); Bernard and Domergue (1991). Cf. Bang (2008: 195).

⁷³ See pp. 7–8. ⁷⁴ Heilporn (2000).

⁷⁵ Hesnard and Gianfrotta (1989: 404). ⁷⁶ *Dig.* XIV. 2, 2, 2; 4, 1–2; XIX. 2, 31.

⁷⁷ Étienne and Mayet (2002: 214–18; 2004: 163–76). Three of the traders were engaged in more than one activity, which explains the total given in my subheading.

of oil amphorae that were emptied as soon as they arrived at Rome. This disparity also explains the chronological imbalance: since the mound has not been thoroughly excavated, only 51 oil traders are attested for the period before Antoninus Pius, as against 216 of them between AD 140 and 161. It is the latter figure that gives us a more reliable picture of the numbers of people engaged in trading a single commodity at any one time.

The Decimi Caecilii

The *familia* most frequently represented among these oil traders is that of the Decimi Caecilii.⁷⁸ The consular dates marked on some of their pieces from Monte Testaccio beside the traders' names go from 144 to 160; but other criteria suggest that some undated inscriptions are from the period of Severus Alexander. In all, there are twelve different *cognomina*. Eight of these are Greek and were probably borne by freedmen, which is confirmed by the functions of *viator* and *lictor* occupied by two of them, of whom I shall speak at greater length. The form *DD. Caeciliorum* without *cognomen* is also found and quite often other forms representing associated members of the *familia*, freedmen grouped together, freedmen with free men, free men grouped together, and even *DD. Caeciliorum et libertorum*, a form that shows clearly the duality of statuses. Lastly, there are two instances of association with another *gens*, one Iulius, whose *cognomen* is missing,⁷⁹ and one Aelius Optatus. From one inscription, which I deal with later, we learn that the family belonged to the colony of *Astigi* (Écija) on the River Genil.

In this group, did the free men and the freedmen have different roles? The answer from the amphorae is: no. They formed associations in various ways; but in all cases they formed a *societas unius negotiationis*, dealing in quite a small number of amphorae, judging by the split cargoes already mentioned. The functions of the freedmen were in no way different from anyone else's. They were all equal owners of the goods carried. In decisions about associations between a freeborn man and a freedman, the initiative presumably came from the former. There is, however, evidence that on one occasion, in 149, D. Caecilius Onesimus, a freedman, took as an associate his daughter Charitosa, which is why Rodríguez Almeida says 'he was no less enterprising than Hospitalis or Maternus themselves'.

The most outstanding character in the family does seem to have been this D. Caecilius Hospitalis. In 147, representing the whole group of oil traders in

⁷⁸ I am relying here on the listing by Étienne and Mayet (2004: 164–75), which recapitulates and marginally complements the one given by Rodríguez Almeida (1984: 223–33). See Remesal Rodríguez and Aguilere Martín (2003: 299–303).

⁷⁹ Rodríguez Almeida (1994: 119).

Baetica, and in tandem with one of his colleagues, Cassius Faustus, he took on the setting-up of a monument dedicated to a prefect of the food-supply system (*annona*) who had been the patron of their college and was now leaving his post to take up that of Prefect of Egypt.⁸⁰ The name of D. Caecilius Hospitalis appears unaccompanied on amphorae from Monte Testaccio in 145 and 147; associated with that of D. Caecilius Maternus in 145 and 154;⁸¹ and once with Onesimus in 149. This Onesimus is definitely the most successful freedman in the family; his name appears by itself, as well as associated with Maternus in 145. He died in Rome: on a large marble altar erected by his heirs, a funerary inscription tells us he was *viator, apparitor Augustorum, diffusor olearius ex Baetica*.⁸² To be exercising the function of *apparitor* is a sign of social advancement.⁸³ This is a freedman who has made good, as can be seen from the high quality of his funerary monument⁸⁴ and his post of *diffusor*. One assumes that other freedmen would have exercised functions in the oil trade that were less conspicuous and of shorter duration.

But the Decimi Caecilii had a longer past and a wider reach. An amphora with the inscription *DD. Caeciliorum* was found at Pompeii (*CIL* IV. 9480); two others with the same inscription were found at Amiens and in the Gulf of Fos (from the shape of the letters, these two would appear to date from the start of the second century); and also from the Gulf of Fos, though from a later date (but still earlier than the middle of the second century), is a new freedman, D. Caecilius Abascantus,⁸⁵ a predecessor of Onesimus. He, too, is known from an inscription at Rome.⁸⁶ And he, too, was a *diffusor olearius*, a member of the order of *apparitores* as a lictor; he lived in the capital, where he had a funerary altar raised to the memory of his wife; his intention was to die there, the funerary monument being for himself, as well as for his freedmen,

⁸⁰ *CIL* VI. 1625 b = *ILS* 1340. See Ch. 15.

⁸¹ On the shoulder of the amphora bearing this date the producer of the oil is mentioned: an Imperial estate (*CIL* XV. 2, 3773; Liou and Tchernia 1994: 151). It is worth noting that oil from an Imperial estate was being handled by the most high-profile, conspicuous traders.

⁸² Panciera (1980: 242); Granino Cecere (1994: 713–15). There has been much discussion about the role of the *diffusor*. The most reliable conclusions are those arrived at by Michel Christol (2008) after a thorough clarification of a copious and at times confusing bibliography. The post of *diffusor olearius ex Baetica* was a stage in the careers of the most important *negotiatores*. The function of the *diffusor*, who lived in Rome, was to work with the community of oil traders, the *corpus oleariorum*: through the organization of the *annona*, which since the days of Hadrian or the beginning of the reign of Antoninus had been responsible for the efficient supply of oil to Rome, he was charged with 'receipt of consignments arriving in the ports and with the transition from transport to distribution to consumers' (Christol 2008: 292). Of the earlier bibliography, see especially Chic García (1986: 248) (who was the first to make the link between grain and oil in the second century, later stressed by Christol); Rodríguez Almeida (1987–8); Granino Cecere (1994); and, for the idea of the warehouses, Taglietti (1994).

⁸³ Purcell (1983); and, on this particular case, Tran (2006: 86–7, 221–2, 466–7).

⁸⁴ Granino Cecere (1994: 713 and fig. 3).

⁸⁵ Amiens: Massy and Vasselle (1976); Fos: Liou (1987a: 56–7). Probably also *CIL* XV, 4058.

⁸⁶ Granino Cecere (1994).

freedwomen, and their descendants. Were they meant to go on engaging in the Baetican oil trade, though now in Rome, or did Abascantus plan to set them off on some other track? Whatever the case, *Astigi*, the home town of the Decimi Caecilii, was now far away. Abascantus is a good example of a freedman from somewhere else who grew rich, set himself up in the capital, and became established there via his own freedmen.

José Remesal has exhumed inscriptions at Rome that mention some individuals by the name of Decimus Caecilius, whom he links to the family of oil merchants.⁸⁷ In fact, though the Caecilius *gentilicium* (family name) was widespread, it was rarely prefaced by the first name Decimus. In addition to those mentioned by Remesal, there were a good fifteen men called Decimus Caecilius in Rome; and they certainly did not all belong to the same family. However, it is quite plausible to see a branch of the Baetican traders in the lineage that goes from Caecilia Helpis, a freedwoman of the *DD. Caecilii Trophimus et Logus*, to her grandson D. Caecilius Vindex.⁸⁸ The probability is even greater with the epitaph to Valeria Firma, who died at the age of 21, and was mourned by her father C. Valerius Onesimus and her husband D. Caecilius (the cognomen is missing). There is a mention of a C. Valerius Onesimus on an amphora from Monte Testaccio. It is true that both names, Valerius and Onesimus, were very common; but there is nothing fortuitous in the relation to D. Caecilius. Everything suggests that he married in Rome the daughter of one of his colleagues. Both of them were living there, though whether temporarily or definitively, we do not know.⁸⁹

As late as the third century there were still Caecilii in the Baetican oil trade. There is an inscription *DD. (or II?) Caecilior(um)* followed by two illegible *cognomina* and several others mentioning only the Caecilii, which Rodríguez Almeida tends to date from the period beginning with Severus Alexander. We are obviously dealing here with a mercantile dynasty that lasted for more than a century and a half.⁹⁰ The impression given (if we bear in mind the enormous over-representation from AD 140 via Monte Testaccio) is of a permanent trunk

⁸⁷ Remesal Rodríguez (2004).

⁸⁸ *CIL* VI. 13823, 13860.

⁸⁹ Étienne and Mayet (2004: 174–5, 188), argue that the Valerii were from Narbonne, whereas, according to Camodeca (1993: 39; 1999), *TPSulp.* 58, 59, and Łoś (2005: 100), they were from Campania. A Valerius Valens, however, appears in two recently published inscriptions from Seville, linked to the *corpus oleariorum* (Stylov and Gimeno Pascual 2002: 345–6; *Hispania Epigraphica*, 10 (2000 [2004], 207–12, no. 577); *AE* (2002 [2005]: 715, 716): he is almost certainly the M. Valerius Valens recorded on amphorae from Monte Testaccio in 145 and 149; so that a Spanish origin for the M. Valerii is now the most likely hypothesis. The place of residence of the C. Valerii remains uncertain. Cf. Rovira Guardiola (2007: 1265).

⁹⁰ One is even tempted to push the lineage farther back, by including in it the QQ. Caecilii, who dealt variously in oil and *garum*, are mentioned on an amphora from Lyons dating from the end of the reign of Augustus or the start of Tiberius', and were well represented in Rome in the middle of the first century, as shown by excavations in the Castro Pretorio (*CIL* XV. 2, 3646, 4753–4; Desbat, Lequément, and Liou 1987: 156–60).

around which many shoots of freedmen spring up and rise to differing levels of success. They are not agents of their patrons. They set up associations independently of them and are identified in inscriptions as owners of cargoes. However, they did collaborate with them, as is shown by the instances of mutual association. The role played by some of these freedmen was short-lived; but others, such as Abascantus and Onesimus, succeeded brilliantly and grew rich. Andrzej Łoś⁹¹ points out that the proportion of freedmen in inscriptions is much lower in the first century than in the second; and the accumulation of more data has only added point to this observation. It is possible that some freedmen, either through the intermediary of their own freedmen or by filiation through continuing for some time to choose Greek *cognomina*, formed branches of their own that, though secondary, were still linked to the family of origin.⁹²

The same could be shown with several other families.⁹³ The Baetica oil traders, as I have already said, had different origins and different places of residence. They were not all of the same rank. A small number of them diversified their activities into other commodities, wine, salted fish, or *garum*: in the first century, P. Attius Severus, the Quinti Caecilii, and the Atinii. One of them, M. Valerius Abinnericus, even simultaneously traded salted goods from Baetica and salted fish from Cumae.⁹⁴

The Urittii

We must pause for a moment with the family of the Urittii, which appears to have created, in the space of two generations, an exceptional network. The name is of Celtic origin, deriving from inhabitants of Narbonne, possibly resident in the valley of the Rhône.⁹⁵ As we have seen, on the ship wrecked at Port-Vendres II, a Q. Urittius Revocatus was trading simultaneously in oil, wine, and reduced must. At Mainz, three amphorae bearing the name of a L. Urittius Verecundus were discovered among a set reused in land draining. They date from the Flavian period and are different from those belonging to Q. Urittius Revocatus: the shape of them is known as Beltràn IIA or Pélichet 46 and they had contained young tuna (*cordyla*), as is indicated on the necks.⁹⁶

⁹¹ Łoś (2005: 85–91).

⁹² The point made by Claude Domergue should be noted: that, among those who developed the silver mines at Cartagena under the Republic, there were 'veritable industrial dynasties', and that, in two cases, freedmen from these families 'branched out on their own into working the mines' (1985: 203; 1990: 324–7).

⁹³ For example, the Coelii. See Zevi (1989: 8–9); Taglietti (1994: 172–5).

⁹⁴ Botte (2009: 144). ⁹⁵ Gascou (2000); Christol (2002).

⁹⁶ Martin-Kilcher and Witteyer (1998–9: 60–4, 117–19); Ehmig (2002); Martin-Kilcher (2002).

As has been the case in several other instances, the *gentilicium* also appears stamped on the handles of Dressel 20 amphorae, followed by different names of slaves or freedmen: the owner of an amphora workshop and his *officina-tores*.⁹⁷ The most remarkable point, however, has been made by Stefanie Martin-Kilcher: that, for certain products from Baetica, Lyons was at the junction of two trading networks with different responsibilities: one for carrying goods from Baetica itself and the other for transporting the amphorae onwards to the Rhine and the Germanic *limes*.⁹⁸ The traders belonging to the second group wrote the initials of their names vertically along the handles of the amphorae, adding them to the names already there. On three of the amphorae from Mainz, the initials are *L.V.V.*, which Martin-Kilcher argues very cogently to mean *L. V(ritti) V(erecundi)*. As far as we know, these traders were the only ones dealing in products from Baetica who were part of both networks. In one case, L. Urittius Verecundus acted as the onward carrier of his own amphora; in both of the others, he was the carrier of goods delivered to Lyons by his colleagues Proculus and Urbicus.

Corroborating evidence for this is provided by a bung of a cask discovered in the River Saône at Lyons, which had been reused as an amphora stopper and on which the name *Vritti Ph...* had been branded.⁹⁹ At Lyons, products brought up river in ships carrying *dolia* were decanted into casks. There is a strong chance that the marks branded onto casks were the equivalents of those painted on the handles of amphorae; and it would appear that the Urittii were also responsible for the northward dispatch of wine which arrived by *dolium*.¹⁰⁰ Since no wreck of any ship carrying *dolia* has yet been located south of Barcelona, it may be assumed that the Urittii also had an interest, like the Peticii, in wine from Hispania Tarraconensis. Such diversity of interests is exceptional.

The Social Organization of Traders from Baetica

By and large, traders in products from Baetica constituted a lasting milieu of men who were often rich, apparently satisfied with their lot, and, at least among those who came from Baetica itself, imbued with a spirit of solidarity that expressed itself via marriages and temporary associations among different *gentes*.

⁹⁷ Étienne and Mayet (2004: nos 1311–19); Liou and Tchernia (1994: 138–40).

⁹⁸ See Ch. 4, pp. 110–11.

⁹⁹ Desbat (1991); Martin-Kilcher (1994: 486); Marlière (2002: 58–9).

¹⁰⁰ Although decanting from *dolia* into amphorae or casks was inevitable after transport by sea or by sea then river, there would have been no point in decanting from casks into amphorae. Nor do I accept that casks for transport were made anywhere in the Mediterranean area before the second century (except in the Adriatic). On this matter I differ from Desbat (1991) and Christol (2002). See Tchernia (1997) and pp. 109–10.

They kept up a strong and close connection with Rome, where some of them spent part of their lives.¹⁰¹ In the first century, Puteoli was where some of them lived.¹⁰² From the time of Augustus, and especially from the middle of the first century, they played a large part in sending supplies to the armies on the Rhine.

Handing business enterprises down through families does not appear to have been infrequent. In the *Astigi* inscription, which makes mention of three generations of M. Iulii, two Hermasiani, and one Hermes, this started with an adoption. In the inscriptions painted on amphorae, two traders, C. Consius Caricus and Sex. Pomponius (or Pompeius) Cornelianus, stress associations with their sons. D. Aticius Atticus Trophimianus is probably D. Aticius Trophimus' son.¹⁰³

These merchants were important in their own communities. Sometimes they held priesthoods or municipal magistracies: Sex. Fadius Secundus Musa in Narbonne;¹⁰⁴ Q. Fulvius Carisianus, pontifex at *Arva*; C. Iuventius Albinus, *duumvir* at *Axati* (and possibly a landowner-cum-trader).¹⁰⁵ The daughter of C. Iulius Alfius Theseus held the particularly honorific post of *flaminica perpetua*.¹⁰⁶ The first M. Iulius Hermesianus, an important *diffusor olearius*, a *curator* of the *corpus oleariorum*, was honoured with a statue erected in a place decreed by the decurions,¹⁰⁷ which was a privilege reserved only for eminent citizens. He did not belong to the *ordo municipalis*; and it is possible that he was a freedman, hence excluded from it though considered to be, as Tran says, 'a semi-notability'.¹⁰⁸ There is, on the other hand, no reason to explain why any D. Caecilius, as far as we know, never exercised a municipal function in their home town of *Astigi*. Perhaps they had no aspirations to such honours; perhaps they had the benefit, as Chic García maintains, of the exemption from *munera* granted to *olearii* by Hadrian.¹⁰⁹

What is most intriguing is why families created so many freedmen and gave them a helping hand in the very line of business in which they themselves were active. Was this not a way of encouraging risky competition?¹¹⁰ Reverting to the point about the splitting of cargoes among many traders, we may suppose that it was necessary to include many people in this business, so as to ensure

¹⁰¹ My conclusions coincide with those of Chic García (1986: 251).

¹⁰² See pp. 270–1.

¹⁰³ See Ch. 15; *CIL* XIII. 10004, 1; *CIL* XV. 3984, 3985; Rodríguez Almeida (1972: 162).

¹⁰⁴ *CIL* XII, 4393 = *ILS*, 7259; *CIL* XV. 3863–70, 3872–3.

¹⁰⁵ *CIL* II. 1064 = *ILS*, 6919; *CIL* XV. 3876; *CIL* II. 1054; Liou (1992: 88); Remesal Rodríguez and Aguilere Martín (2003: no. 80).

¹⁰⁶ González Fernández (1983: 188–91); *CIL* XV. 3885; Le Roux (1988: 270); Taglietti (1994: 175).

¹⁰⁷ *CIL* II. 1481. See Ch. 15. ¹⁰⁸ Tran (2006: 257).

¹⁰⁹ Chic García (1987–8: 377–81; 1994: 122).

¹¹⁰ Tran (2006: 510–11) contrasts examples of joint endeavours of freedmen and patrons with the passages in the *Digest* (XXXVII. 14, 18 and XXXVIII. 1, 45) that entertain the possibility of competition between them.

that supplies of oil from Baetica were distributed in small consignments, in Rome, Gaul, the Rhineland camps, and Britain. The presence of agents from the *familia* in the ports of arrival was a guarantee.¹¹¹ It seems plausible, too, that the wealthiest merchants also saw fit to make loans to freedmen. In addition to their direct commercial income, they earned regular interest from a share in the profits made by any freedman whose career they had sponsored, and their expectation was that, if he succeeded, part of his legacy would revert to the main line of the dynasty. An example of this might be the case of Caecilius Hospitalis, who, jointly with Caecilia D. f. Materna (probably the daughter of his colleague Maternus) and a Caecilia Philete, inherited from the couple Caecilius Silo and Caecilia Trophime (otherwise unknown).¹¹²

Unequal Appetites for Honours

We have just seen various examples of wealthy merchants, some of whom founded lasting dynasties.¹¹³ Apart from functions reserved for freedmen, did they occupy an acknowledged position in society? The gauge by which this is generally judged is membership of the equestrian or decurion orders. And, as we know, very few traders are to be found in either of these.

On the tomb of C. Sentius Regulianus, a Roman knight, his family, which had stayed in Gaul, had mention made of his two professions: *diffusor olearius* and *negotiator vinarius* at Lyons. He was the only Roman knight who records officially his function as a *negotiator* in a stone inscription. It is likely that he owed both his exalted status as a knight and his residing in Rome to his position as *diffusor olearius* and to the relationship that this office required him to have with the prefect responsible for the *annona*.¹¹⁴ Others might not have wished to be so explicit. I tend to doubt that Cornelius Senecio or Norbanus Ptolemaios would have wanted to be so described.

From the second century onwards, several traders entered the municipal *ordo*. In 173, at Ostia, the owners of all the ships plying routes to Africa, as well as those from Sardinia, who had their names added at the eleventh hour between the lines,¹¹⁵ honoured a grain trader (*mercator frumentarius*), M. Iunius Faustus, of the Palatine tribe, very likely the son of a freedman, a *duumvir*, a *flamen* of Rome and Augustus, and a patron of colleges or guilds, someone who had risen to be an important personage.¹¹⁶ In Lyons, in the third century, C. Apronius Raptor was honoured as a trader in wine and a boatman

¹¹¹ Cf. p. 254. ¹¹² CIL II. 1474; Chic García (1987–8). See Ch. 15.

¹¹³ Questioning of the idea that there was a compulsory ‘turnover’ of those active in trade started with Garnsey (1981: 370), on the matter of freedmen.

¹¹⁴ CIL VI. 29722 = ILS 7490. See p. 55, n. 82, and most recently Tran (2006: 282–3).

¹¹⁵ For this inscription, see p. 139.

¹¹⁶ CIL XIV. 4142 = ILS 6140.

of the Saône, a patron of the guilds of these professions, but also as a decurion at Augusta Treverorum (Trier).¹¹⁷ We shall soon come upon another one at modern Nijmegen. Just before the middle of the second century, Sextus Fadius Secundus Musa of Narbonne rejoiced in the fact that he had held all the municipal positions and that his grandson was a *vir clarissimus*; as his name figures on amphorae from Monte Testaccio, we know he traded in oil from Baetica, but the *fabri subaediani* who raised a statue to him did not mention that in their dedication.¹¹⁸ I have already spoken of three other traders from Baetica; the figure of M. Antonius Terens we shall come to soon; and in Jean Andreau's list dating from 1985 there are three more examples.¹¹⁹ H. W. Pleket, after a most thorough study of the eastern Mediterranean, where there is no shortage of evidence of wealth acquired through shipowning, turned up only one skipper who was a *bouleutês* in Nicomedia, and one trader in purple at *Hierapolis*,¹²⁰ which it will be agreed is rather slim pickings. Obviously, there could easily be other cases; but they would not affect that conclusion. It is well established that municipal *curiae* were generally reluctant to accept traders, let alone the sons of freedmen. Pleket reminds us that it took a recommendation from Hadrian for the skipper Lucius Erastus to be admitted to the Senate of Ephesus.¹²¹ However, there is another factor that is worth examining: the wishes of the traders themselves. We have already noted that Mireille Cébeillac has cast doubt on the automatic assumption that the richest *euergetai* were part of the political elites; she suggests that rich trading families in Puteoli and *Scolacium* 'did not rise (nor did they wish to rise) to positions in local government'.¹²² It is this very hypothesis that I have proposed on the matter of the Decimi Caecilii from *Astigi*. Almost fifty years before me, Silvio Panciera came to a similar conclusion about the Barbii from Aquileia.

The Barbii from Aquileia

The largest *gens* in Aquileia, and by far the best known to epigraphers, were the Barbii. They are mentioned in more than 150 inscriptions from Venetia, Noricum, and Pannonia. Having probably come from Italy at the time of the foundation of the colony in 181 BC, their name is mentioned early in the first century BC as the dedicators of a bronze statue known today as the Ephebe of Helenenberg, discovered in the sixteenth century in the commercial oppidum of Magdalensberg. There are three names engraved on it: one of a native; one

¹¹⁷ *CIL* XIII. 1911, 11179.

¹¹⁸ *CIL* XII. 4393 = *ILS* 7259.

¹¹⁹ Andreau (1997: 4, n. 2 (1985a: 374)). See also Pleket (1984: 24, n. 104).

¹²⁰ Pleket (1984: 10, 20). ¹²¹ Pleket (1984: 10).

¹²² Cébeillac-Gervasoni (2003), 545. The author stresses that there is broad disagreement on this point. The fact is that there is broader agreement on the opposite conclusion.

of a freedman procurator of the Barbii; and one which is that of one of their slaves. It is beyond doubt that at that time the family engaged in the iron trade with the native peoples of independent Noricum. From this evidence it was inferred that, by the time of the Empire, the *gens Barbia* represented a huge commercial enterprise and that all their widely dispersed freedmen were acting as the agents of 'head office' in Aquileia. It was suggested by Silvio Panciera in 1957, though his view went unheeded by many, that this scenario was inaccurate.¹²³ Many of the Barbii were busy in other walks of life, such as the army or the making of tiles and bricks; and the lineages of freedmen established in other towns of the region could well have become independent and developed activities that were quite different.¹²⁴ This does not mean Panciera disputes that there was a long-lasting commercial *familia*; and it is likely that, by the time of the Empire, at least one branch of the Barbii was engaged in trading between Aquileia and the Danube.¹²⁵ Nor can it be doubted that this was a *gens* with rich and powerful members. Nevertheless, no Barbius ever figures as a member of the *ordo* of Aquileia. The only explanation that fits is Panciera's: 'It appears that the Barbii of Aquileia had no aspiration to perform even municipal functions.'¹²⁶

The Secundinii and the Igel Monument

Jérôme France has recently reverted to a matter much studied by other scholars: funerary monuments in another corner of the Empire, the region around Trier. The most revealing of these monuments is the one at Igel, a handsome column standing 26 metres high, erected early in the third century AD by the Secundinii family, three generations of whom are mentioned in the inscription. Some of the reliefs show mythological scenes; others, scenes taken from the cloth trade: inspection, transport over land and by river, and sale. And these particular scenes are on the main face of the monument, the one overlooking the Moselle. As Jérôme France says: 'In this way, the Secundinii were demonstrating as clearly as possible the consubstantiality of the link between the family, its fortune, and the cloth trade.'¹²⁷ His explanation of the predominance of mythological scenes (they make up almost half of the reliefs) draws on Rostovtzeff's surprising adaptation of an idea deriving from Max

¹²³ Tran (2006: 378 ff.) has adopted a similarly sceptical stance on the Egrillii and others.

¹²⁴ Panciera (1957: 94–9).

¹²⁵ Sašel (1966). Tassaux (1982: 259), who properly rejects the idea that C. Laecanius Bassus was the exporter of the oil in his amphorae, forms the hypothesis that the Barbii may have played a part in the organization of this long-distance trade.

¹²⁶ Panciera (1957: 99, n. 289).

¹²⁷ France (2004: 162).

Weber: what the Secundinii were expressing, based on a Stoical and Neo-Pythagorean ideal, was not the parvenu's self-satisfaction (this was Drexel's view, in the first comprehensive study in 1920), but the fact that, 'having lived a model life of achievement, and through strict fulfilment of their duty, they had acquired the right to the final *apotheosis*'.¹²⁸ This is predestination transposed from *The Protestant Ethic* into Roman religion. However, without going that far, we can conclude at least that, for the Secundinii, the practice of their specialized trade definitely constituted a value that enhanced the illustriousness of the family.¹²⁹

At this point, Jérôme France's study runs counter to the standard version. For one thing, no municipal function is mentioned in the inscription on the Igel column. Notabilities in Gaul often omitted them from their funerary inscriptions, from which France argues that 'it can nevertheless be assumed that the members of such a powerful family belonged to the *curia* of the Treveri'.¹³⁰ This is certainly a plausible hypothesis: we have already come across Apronius Raptor, a wine trader and decurion at Trier. But, given what we have just seen in Baetica, in southern Italy, and in Aquileia, it strikes me as superfluous.

Jérôme France's thesis runs into a second difficulty: the Secundinii are not even remotely ashamed of what they do, despite the disdain for manual work and trade that France says was a traditional value of Roman notabilities. This difficulty he resolves by defining the Treveri as an exception.¹³¹ However, far removed from Trier and 150 years before, the same could be said of the Umbricii Scauri at Pompeii. In the atrium of their house, the four corners of the mosaic are decorated with images of the *urcei* in which they sold the *garum* and *liquamen* that they produced; the inscriptions painted on the *urcei* are legible and include both the name of Scaurus and the nature of the product contained in the jugs.¹³² This represents a frank display of the foundations of the family's wealth.¹³³ The difference is that here we are sure, thanks to a fine funerary inscription, that this family had gained access to the highest level of the *curia* of Pompeii: one A. Umbricius Scaurus, who had predeceased his father of the same name, was a *duumvir* and is commemorated by an equestrian statue in the forum. The inscription dates from between AD 40 and 60;¹³⁴ the family's *garum* industry was still active at the time of the eruption of Vesuvius. We cannot say whether ownership would have passed down to the *duumvir* or whether he would have kept it going if he had outlived his father. What we can say, though, is that, while holding office, he does not seem to have been embarrassed by his father's profession or the public attention that his father drew to it. In Rome, in the late second century,

¹²⁸ Rostovtzeff (1957: 616–17). ¹²⁹ France (2004: 154, 162–3).

¹³⁰ France (2001: 54, n. 25).

¹³¹ France (2004: 167).

¹³² Curtis (1984).

¹³³ As noted by Elio Lo Cascio (2009; 240 (1992)).

¹³⁴ Kockel (1983).

the sons of M. Antonius Terens, who was from Misenum, where he had held all municipal offices and achieved all honours, erected a funerary altar to him. They added that he was a well-known trader in cattle and pigs.¹³⁵ These are traders who make no bones about bruiting abroad what they do.¹³⁶

Scholars have built up a uniform image of the behaviour of traders and their place in society by constantly drawing the same parallel between the end of the page from *De officiis* on occupations (ignoring the line: *qui honeste rem quaerunt mercaturis faciendis*, from the *Paradoxa*) and Petronius' fiction. But the latter is the work of an aristocrat caricaturing in the most farcical and biased way the blunders of a freedman who apes the customs and culture of the elite though devoid of the slightest tincture of them himself. That is to say, here we have a literary comedy that is read as though it was a sociological document. All that has to be done next is to add Jean-Samuel Depont (see Ch. 1, p. 21) and Molière's *Bourgeois gentilhomme* to give the impression that Trimalchio is a universal model of the often absurd aspirations of the merchant grown rich: retire from business, buy lands, take up the way of life of the latifundian aristocracy, and join the political elites. Yet, at the time of Jean-Samuel Depont, there were traders in Bordeaux, Bayonne, and La Rochelle, who 'seemed perfectly satisfied to let others govern while they themselves got on with their workaday jobs, with what they did well, seeing to the demands of their wine storehouse or their counter . . . men of trade and proud of it'.¹³⁷ That there were Roman traders in this same category, bearing no resemblance to the Cicero-Trimalchio model, cannot be ruled out. Once they had made their fortune, they did not seek to give up their occupation and distance their families from it.¹³⁸ Moreover, several recent studies have shown that they were not systematically shunned by the elites, and stress the role of the colleges or guilds in establishing social relations between their members and the great personages who often served as their patrons.¹³⁹

Several of these traders managed, thanks to the profits from their commercial activity, to rise to the first ranks; this gave them multiple activities to attend to; they bid for state tenders; they may have become equestrians; and they did not flaunt their commercial undertakings. A very few, in some cities, and not before the end of the Julio-Claudian dynasty, became members of the

¹³⁵ CIL VI. 33887 = ILS 7481: *negotiatori celeberrimo suariae et pecuariae*.

¹³⁶ J.-P. Morel made a similar comment long ago about manufacturing and 'captains of industry' (1985: 95–8).

¹³⁷ Forrest (1995: 131–2).

¹³⁸ Cicero may have had traders partly in mind when he spoke of those who are neither philosophers nor statesmen, but who take pleasure in husbanding their fortune and in increasing it through careful reckoning, attention, and economy (*delectarentur re sua familiari . . . deinde augeatur ratione, diligentia, parsimonia*) in *De officiis*, I. 92. See Gabba (1988, 97 (1980)) and Narducci (1989: 234).

¹³⁹ Christol (2003); Tran (2006); Verboven (2007a).

ordo municipalis while still pursuing these commercial interests. Some still took pride in them; others, having risen to such heights, said nothing of them. Presumably more of these men conformed to the stereotype of leaving trade behind them or preparing their descendants to leave it behind in order to enter the ranks of the political elites. But there were other families of importance who remained unattracted by honours and the public posts that went with them and who retained the same status over several generations. The fortunes they enjoyed were of different composition from those prevalent among the aristocracy.

URBAN FORTUNES

On this matter, too, the work of Jérôme France proves useful. His comments on the Igel column were inserted into a study of the complete iconographic record of the Neumagen monuments, the remains of funerary monuments from the second century and the early third, which presumably once belonged to a burial ground in Trier before being recycled into the rampart of a *castrum*. France identifies two iconographic programmes: one in which the dominant subjects are hunting scenes and pictures showing the running of an estate; and the other in which we see especially images of river or land transport, as well as the practice of crafts and the sale of the products from them. The first ones he calls 'the *latifundia* cycle' and the second 'the *negotia* cycle'. The analysis, which is brilliant, is evidence in support of the idea that there was a dichotomy between fortunes essentially based on landowning and those focused on trade. France says: 'It is obvious that here there is a figurative contrast between the *otium* of the landed noble and the *negotium* of the magnate from the world of craft and commerce.'¹⁴⁰ Seneca, speaking of Cornelius Senecio, unintentionally defined a similar difference.

A passage from Dio of Prusa provides a more theoretical framework for these comments, one that tends to confirm their validity. One day, when he was the sole passenger sailing from Chios in a small fishing boat, he was caught in a gale. The sailors eventually ran the boat ashore on a beach in Euboea, where it was immediately destroyed by the sea. In a sheltered spot, they saw a boat with men fishing for purple and decided to stay and work with them, leaving Dio wandering on the shore, where he eventually met a huntsman. This man lived there with his own family and another, making a living from hunting and some cultivation of lands that they had cleared themselves. Greatly taken with this way of life, Dio undertook to write a eulogy of poverty.

¹⁴⁰ France (2004: 154).

Having completed his accounts of hunting and agriculture, he then dealt with life in towns: there, by the work of one's own hands, one can live in decent poverty, all in all a better way to live, more useful and in greater conformity with nature than the wealthy, who lend money at exorbitant rates of interest, keeping an eye on the dates when payments fall due, who own great tenement blocks, ships, and many slaves.¹⁴¹

Dio here defines four levers of urban wealth: money-lending; renting out real estate; maritime trade; gangs of slaves. H. W. Pleket, in his investigation into the wealth of the urban elites in the cities of the eastern Mediterranean, reads this passage and others as evidence that great landowners invested in ships and trade.¹⁴² To my mind, it is extra evidence for the specificity of the commercial basis of urban wealth and for the possibility of drawing profits from trade without seeking to graduate to an aristocratic way of life. Those who owned the boats and used the skippers, of whom Pleket counted such numbers in the East, were the rich city-dwellers who lived without caring for honours.

Dio's text is confirmed by others that either complement it or put a finer point upon it. According to Philodemus of Gadara, the least improper way for the wise to earn income, if they do not teach philosophy, is to draw it from a tenement building or from slaves who are specialized and experienced in trades to which no dishonour attaches.¹⁴³ Whichever translation one relies on, the existence of such gangs of slaves is implicit in the words *operis dandis* figuring in the passage from Cicero's *Paradoxa stoicorum* already quoted. Ownership of such slave gangs complements commercial activities and the profits earned from public contracts.

Urban fortunes might well also include capital in the form of lands owned, and probably did more often than not. But the difference between this type of fortune (which we could also call plebeian) and latifundian fortunes (which we could call senatorial) is that the agricultural estate was neither central to it nor its prime source. Owning an agricultural estate was certainly possible but not necessary. The latifundian fortunes relied neither on shipowning nor on tax-farming, both being forbidden to senators. Money-lending for interest, common to both types of fortune, was widely practised.¹⁴⁴ Ownership of tenement

¹⁴¹ Dio Chrysostom, VII (*Euboicus*), 104.

¹⁴² Pleket (1983, 1984).

¹⁴³ Philodemus, *Oec.* XXIII (ed. Jensen, 1906). I am grateful to Paul Veyne, who, in a positive response to a question of mine about the equivalence between *συνοίκια* and *insula*, drew my attention to the passage in Philodemus; and to Didier Pralon, who set to rest my doubts about its meaning.

¹⁴⁴ There are other instances of aristocratic fortunes that combine landed property and moneylending, while ruling out trading activities. In the sixteenth century, 'the patricians of Genoa would have blushed for shame at the thought of engaging in trade, whereas they looked on usury as completely honourable' (Ehrenberg 1955: 186). By the end of the century, the *leges novae* had changed all this and legalized all economic activities (Angiolini 1995: 103).

blocks was taken for granted as part of urban fortunes; it was also common among senators and probably many great landowners, though they never saw it as anything but an incidental source of income.¹⁴⁵ Ownership of gangs of able-bodied slaves, who could be supplied or used in public-works tenders, was close to the margin of the improper. The idea that much of the wealth of Crassus, who did not mind stooping to financial practices unworthy of a senator, came from slave gangs is a dubious one.¹⁴⁶ Cicero makes no mention of them among his illegal activities.

The texts by Labeo and Plutarch that deal with slaves appointed to lend money at interest, to cultivate land, to engage in commerce, to command ships, or to make contracts¹⁴⁷ are relevant to the requirements of urban or trade-based fortunes. From the examples on which I have focused, two quite different modes of wealth can be defined. In each mode, it was possible to amass considerable riches; but the most enormous fortunes, profiting as they did from the exercise of administrative functions and imperial largesse, continued to be those enjoyed by the aristocrats.

DIVERSITY AND SPECIFICITY

A great many traders were required to meet the highly diverse needs of the Roman Empire. Even when the state paid attention to them, it rarely had recourse to direct intervention. Claudius' measures in favour of grain merchants, Hadrian's in favour of oil traders, or the way supplies to the armies were organized (see Ch. 4) were all posited on the availability of a population of specialized traders. Differing requirements were met by different types of traders and diversified organizations. The system that satisfied the Roman aristocracy's taste for goods from the East was very different from the one set up to supply grain to the people or the armies stationed on the *limes*. Deliveries of wine to Rome were not in the same hands as deliveries of wheat. Transporting goods from Alexandria was nothing like crossing the Channel, which became much more frequent after the conquest of Britain under Claudius.

So the men of substance whom we have been considering up to now, who organized long-distance trading but who, of course, never sailed on their own ships, can in fact be contrasted with less exalted men, such as those

¹⁴⁵ Van der Bergh (2003: 444–6). For Cicero's income from his urban properties, tenements, and shops, see Frier (1978–9); Garnsey (1998: 65–78 (1976)). See also p. 169.

¹⁴⁶ Plutarch, *Crass.* II. 8. Plutarch says merely that specialized slaves represented the greater part of his fortune (τιμὴν), but does not specify that he earned anything from them beyond the services they rendered in managing his fortune.

¹⁴⁷ See Ch. 1, p. 27.

who set up altars to a local divinity of pre-Roman origin, Nehalennia, in the two sanctuaries of modern Domburg and Colijnsplaat at the mouth of the Scheldt. Nehalennia protected mariners and can be seen sitting with a dog beside her, a basket of apples on her knees, and sometimes a steering oar in her hand. Either they ask her to bring their cargoes safe to harbour or they thank her for having done so.¹⁴⁸ They came from the north of Gaul or Germania, from Nijmegen and Trier, from the lands of the Velioasses farther to the west towards the Rouen area, from the lands of the Sequani farther south near Besançon (Vesontio) or the Raurici around Augst (Augusta Raurica). Many of the dedicators put only their names, not bothering to state their trade or status; but it seems clear that, even among these men, most were probably traders. Two of them describe themselves simply as *negotiator*. Some define themselves by the products they trade, *altec*, salt, ceramics.¹⁴⁹ Two wine traders make no mention of their activity in the actual inscription on the altar; but it shows in the image of river boats laden with casks engraved at the foot of it. Others indicate the country where they exercise their trade: four are *Britanniciani*, one of whom specifies that he deals in pottery; one is *Gallicanus*; and there is one who says he is *Can[tianus]* and *Geserican[us]*—that is, from Kent and Boulogne, meaning that he makes the short crossing of the Strait of Dover and its environs. At least two of the *negotiatores Britanniciani* operated over a larger area, as can be seen from their other votive inscriptions, one in Cologne and a Velioass in York.

Even among traders of this type, less exalted than the ones we have examined hitherto, there are obvious inequalities. The member of the Raurici tribe and a man from Cologne were *seviri Augustales*; and Q. Phoebus Hilarus, who had two inscriptions carved on behalf of his merchandise, one a vow and the other of thanks, was a decurion at Nijmegen.

The contemptible image of the *kapelos*, the retailer who dealt with consumers, is simple to draw; but that of the *emporos* is more complex. At a lower level than the grand personage with his entrepreneurial activities, who combined large-scale trade and tax-farming and drew upon a workforce of many dependants, there was a gradation of different levels and specialized occupations, which varied from province to province and at different periods. One such occupation that is worth a closer look is that of the slave traders. They were, as a group, more subject to the accusations of greed and cheating with the quality of the merchandise made against all traders; and nowadays the small number of epitaphs with any mention of them is generally explained by

¹⁴⁸ *Pro mercibus bene servandis, ob merces bene conservatas*. The Domburg material was studied and published by Hondius-Crone (1955) and the Colijnsplaat data by Stuart and Bogaers (2001). The information that I give is drawn from the latter, a fine publication.

¹⁴⁹ About ten other inscriptions by *negotiatores cretarii* or *artis cretariae* are known from towns on the Rhine, the Moselle, and the Neckar, or at Lyons: Schlippschuh (1974: 61–5); Raepsaet-Charlier and Raepsaet (1988).

their reluctance to admit to their line of business. Yet sometimes they enjoyed the favour of the most powerful patrons and benefactors. I have already alluded to Sornatius.¹⁵⁰ During the Empire, C. Sallustius Crispus Passienus, who was twice a consul, in AD 27 and 44, a proconsul of Asia, and, unfortunately for him, Agrippina's second husband, was the patron of slave traders from Ephesus.¹⁵¹ Under Hadrian, at Avenches, the Helvetians dedicated an inscription to their patron, Q. Otacilius Pollinus: at 6 x 3 metres, it may be the largest of all Latin inscriptions.¹⁵² Otacilius was also *inquisitor Galliarum*,¹⁵³ a patron both of boatmen plying the Saône and the Rhône and of slave traders from both sides of the Alps,¹⁵⁴ who trekked German slaves across the Great St Bernard Pass to sell them in Italy.¹⁵⁵ And Augustus, who never invited a freedman to eat with him, did invite Toranius Flaccus, a trader in luxury slaves for artistic, erotic, or other purposes, all of them very expensive: for 200,000 sesterces he sold to Mark Antony a pair of young boys of remarkable beauty and so alike that they might have been twins, though one of them was from Asia and the other from north of the Alps. On appropriate occasions, Toranius could even reply to Augustus with an impertinent quip, proof that the quality of the goods could excuse anything and that even a slave trader could enjoy an assured place in society.¹⁵⁶

If we leave aside the businessmen, almost all of these traders seem to have been solidly based in their habitual networks, restricting themselves to one or two products and to a territory that changed little over time. The finest individual example of this is Flavius Zeuxis, who, as his oft-quoted epitaph says, in his career as a trader rounded Cape Malea seventy-two times. According to Pleket, he was a trader in woollens.¹⁵⁷ The figure of the trader 'going from port to port, selling what he has, buying what he finds',¹⁵⁸ is a figment of literature more attested in Plautus or the Greek novels than by the epigraphical record. Even though it cannot be ruled out that unspecialized traders most often did not indicate their profession in their epitaphs, it seems to have been a noteworthy feature of most Roman traders that they remained faithful to their particular area of activity. The Decimi Caecilii or the Secundinii stuck to their professions and did not attempt to conquer other domains. And those who appear to have shown greater initiative still kept, with few

¹⁵⁰ See Ch. 1, p. 19.

¹⁵¹ On all of this, see the important article by Harris (1980).

¹⁵² Oelschig (1995); *AE* (1995: 1141).

¹⁵³ A high-level legal position with the assembly of the Three Gauls.

¹⁵⁴ Or belonging to the *Splendidissimum corpus negotiatorum Cisalpinorum et Transalpinorum*, as the favoured reconstruction has it. My own suggestion would be *venal(iciariciorum)* without *corporis*.

¹⁵⁵ Wibl  (2006).

¹⁵⁶ Pliny, VII. 56; Suetonius, *Aug.* LXIX. 2; Macrobius, *Sat.* II. 4, 28. See Harris (1980).

¹⁵⁷ *Syll.* 1229 (*Hierapolis* of Phrygia); Roug  (1966: 286, n. 1); Pleket (1984: 31; 1990: 35); Giardina (2002a: 336 (Giardina and Gurevi  1994: 32)).

¹⁵⁸ Roug  (1966: 415).

exceptions,¹⁵⁹ a foot in their initial occupation: in the first century AD, M. Valerius Abinnericus, a trader in salted goods from Baetica, also engaged in trading salted fish from Cumae, an exceptional case of a trader from Baetica handling products originating from somewhere else.¹⁶⁰ However, he went on trading his salt provisions. Conversely, in the third century, Coelia Chrysis was *negotiatrice olei ex Baetica, item vini*.¹⁶¹ she added wine to her oil business, following a tradition dating back to the Urittii in the first century. The wine was very probably from Baetica.¹⁶² The great leap came with participation in tax-farming. This was reserved for a few outstanding figures.

This situation is very different from the one described by Fernand Braudel when speaking of modern times: ‘to *become*, and above all to *be*, a trader is to have not the right but actually the obligation to have a finger, if not in every pie, at least in many of them.’¹⁶³ On the contrary, in the Roman Empire, carrying the same goods along familiar routes seems to have been the norm. If there were heirs, whether freedmen or natural descendants, they mostly trod in the footsteps of their predecessors; and any who went in for trading opted for a single domain in which to exercise their talents. One can see this as a tendency towards stability or routine; and it is the counterpart to the stability of the trade practices themselves. Many of these became established during the reigns of Caesar and Augustus and lasted at least till the third century. The major innovations dating from after the start of the common era were the development in trading wines from southern Gaul and the valley of the Tiber under the Flavians, to be dealt with in the next chapter, and the advent of African products from the late first century and especially the second half of the second century. Otherwise, to our knowledge, the trafficking of the most important items underwent no radical changes between Augustus and Septimius Severus.

A second difference was that, despite the wealth of the entrepreneurs and their role in tax-farming, the Roman period gives no example of a Medici, say, or a Fugge—in other words, a trader who through his prosperity and the development of his business interests came close enough to the wielders of political power to exercise any of it himself.¹⁶⁴ This is explained, and rightly so, by Drinkwater, Pleket, Andreau, and France,¹⁶⁵ by the lack of state borrowing. By the late Middle Ages, the operations of modern states against the resistance of feudalism, enabled traders, on whom central governments relied, to play a

¹⁵⁹ The Peticii and the Urittii may have extended their activities more widely than most of their colleagues.

¹⁶⁰ Botte (2009: 144). ¹⁶¹ Taglietti (1994: 172–3).

¹⁶² On this point, I share the interpretation of Étienne and Mayet (2004: 188).

¹⁶³ Braudel (1979: ii. 334). ¹⁶⁴ Andreau (1997: 41 (1985a)).

¹⁶⁵ Drinkwater (1981: 231; 2001: 304–6); Pleket (1990: 38–40); Andreau (2001: 222–7); and France (2004: 168).

political role.¹⁶⁶ Their wielding of real power began once they started financing princes and kings. Public debt, as Jean Andreau points out, appeared in the thirteenth century, in response to the financial needs generated by warfare.¹⁶⁷ In the late Middle Ages and during the Renaissance, European states large and small were constantly at war with each other, although as a rule these wars were funded by no permanent taxes. In order to attract mercenaries, or at times raise an army and finance a campaign, there was an urgent need of money.¹⁶⁸ Borrowing was the simplest solution; but it was on terms that were generally very favourable to the lenders. Roman emperors did not have such financial problems, because a more established system of taxation was more efficacious in bringing in revenue,¹⁶⁹ and military expenditure was more stable. It was not traders, but the imperial freedmen and the aristocrats charged with administrative responsibilities who benefited from the public purse and the head of state's largesse.

Finally, frontiers were necessary to the emergence of an ideology of mercantilism. The isolated case of the outflow of gold and silver to the East, and Pliny the Elder's deploring of it, were insufficient to foster any doctrine of national enrichment. Yet mercantilism appears nowadays to have been the foundation on which the integrated market developed. By supporting exports, in a spirit of economic rivalry, states facilitated the development of material and institutional infrastructure required by the extension of markets. Admittedly, the Roman state did play a considerable part in creating infrastructure; but its main concern in so doing was the supplying of its own needs—in other words the provisioning of Rome, its armies, and the imperial palace. Its processes were selective and directive. The *pax romana* and the unity of the Empire facilitated trade but did not further the power of traders.

¹⁶⁶ Poulalion (2001); Bang (2008: 55–6). It had already been in Adam Smith (1776: bk III, ch. III).

¹⁶⁷ See the similar remarks of Ehrenberg (1955) and Braudel (1976: ii. 168), on the evolution of the maxim *pecunia nervus belli*, which Tacitus (*Hist.* II. 84, I) says Mucianus applied to civil wars, but which by the fifteenth and sixteenth centuries had become a leitmotiv of more general relevance. Ehrenberg's introduction (1955) is an eloquent description of the financial problems arising from the wars of the fifteenth century.

¹⁶⁸ Gibbon's remark, noted by Finley (1985: 148), that, for a territory equating merely to a small group of Roman provinces, Louis XIV's armies were greater than those of any of the emperors, applies only to an exceptional period, one that destabilized the finances of the kingdom of France. But it would have been accurate on the European scale at the most disturbed times over the preceding centuries: Braudel estimates that, at the time of the battle of Lepanto, Christian and Muslim galleys together were crewed by 150,000–200,000 men. War in the fifteenth and sixteenth centuries, with its artillery and arquebuses, and the importance of naval squadrons, was costlier than garrisoning the *limes* and even the campaigns of the Empire.

¹⁶⁹ Pleket (1990: 39).

The Matter of the Market

The point at issue here is the integration of markets in the Roman Empire. Was there a set of unconnected markets? Or did different markets all interact? Here, too, diametrically opposed opinions stand side by side, sometimes without impinging on or engaging with one another.

THE ENORMOUS CONGLOMERATION OF INTERDEPENDENT MARKETS: A RED HERRING

The broadest generalizations being the simplest ideas to handle, the statement that Rome enjoyed ‘an economic system that was an enormous conglomeration of interdependent markets’ has for some time been much discussed. According to E. Lo Cascio, it is a controversial notion. Peter Bang has argued against it; Léopold Migeotte quotes it as an indispensable reference point for his diachronic study of the economies of Greek cities from the archaic period to Roman times, but comes to the conclusion that it is untenable. Yves Roman, on the other hand, in his conclusion to the same collection, seems to take it for granted, a view that both Richard Hingley and Annalisa Marzano, despite some reservations, come close to sharing.¹

The statement derives from an article by Peter Temin, who says with laudable clarity at the beginning: ‘Finley declared that “ancient society did not have an economic system which was an enormous conglomeration of interdependent markets”’, and ends by saying: ‘Finley was wrong; ancient Rome had an economic system that was an enormous conglomeration of interdependent markets’.²

¹ Hingley (2005: 106); Bang (2006; 2008: 30–2); Lo Cascio (2007c: 622 (more critical in 2009: 208)); Marzano (2007: 7); Migeotte (2008); Roman (2008).

² Temin (2001). A second article (Kessler and Temin 2008), which aims to demonstrate an inverse correlation between distances from Rome and the price of wheat, is unfortunately ruled out of court at the very outset by its preposterous geography: the distance from Madrid to Rome

The same clarity appears to mark Temin's approach. He begins by equating Finley and Polanyi, the former having implicitly based his criticism of Rostovtzeff on the latter. Polanyi's three categories of exchanges (redistribution, reciprocity, and market) are examined in turn: those that have no relevance to the market are inapplicable to Temin's chosen set of examples. He notes the existence of coinage, prices, interest rates, contracts, a concern for profitability, and several intelligent economic behaviours. In his view, there were no completely autarkic agricultural enterprises; those who ran them were aware of market prices and took account of them in their economic forecasts. Even in Rome, the grain dole represented a small minority of transactions, all the rest being under the control of private traders and subject to market forces. State transport was covered by contracts. Prices were therefore central to transactions, varying according to supply and demand and regulating markets which were economically connected. So here we have the Roman Empire endowed with an economy made up of markets, all of them interconnected, though some more closely than others, depending on the region.

A great deal could be said about Temin's examples, his choice of them, their accuracy, and the way he interprets them. His conclusions about the agricultural-produce market are highly debatable, as has been pointed out by Peter Bang, who has also remarked that the exorbitant interest rates cited as market effects were actually the hugely disproportionate ones demanded by the politically powerful.³ It should be added that, on three separate occasions, Ulpian makes the very point that any evaluation of valid interest rates must acknowledge that they are largely determined by the customs of a province or region;⁴ and, before Ulpian, Gaius had already stressed that, from place to place, there were great differences in the price of money.⁵ On the central point of grain for Rome, Temin ignores the long-standing estimates of total deliveries of tax grain: only about a third was doled out free; the rest was put on the market by the state, at least partly in Rome, and the price of it could be set politically.⁶ Nor should it be forgotten that exports of grain from Egypt to anywhere other than Rome were first forbidden, then controlled.⁷ As for contracts with shipowners, an addition to Diocletian's edict found in the

as the crow flies is given as an approximation for the distance from Lusitania to Rome; the Po Basin is linked to Rome by rivers, and so on.

³ Bang (2006: 54–5, n. 8; 2008: 30–2).

⁴ *Dig.* XXVI. 7, 7, 10; XXVII. 4, 3, 1; XXX. 39, 1.

⁵ *Dig.* XIII. 4, 3, which I quote on p. 184, n. 33. For a thorough discussion, see Andreau (2010: 161–4).

⁶ Van Berchem (1939). See more recent references in Virlouvet (2003: 67–72); Erdkamp (2005: 244–57, 326 (256: 'Free trade in the empire's capital operated in the margins of a system that was characterised by public supply channels')); De Romanis (2007: 223), arrives at a figure of 35–40 million *modii*, substantially higher than Van Berchem's 27 million. Bang (2008: 177, n. 14) summarizes the issue.

⁷ Casson (1980: 23–5); De Romanis (2003a: 703–5).

Aezani fragments makes it plain that they did not abide by the general rules, at that time at any rate.⁸

One could comment on other details; and one might wonder whether the broader Roman economy can be fitted into categories as Procrustean as those of Polanyi. My purpose here, however, is first to inspect the structure and the basis of Temin's text, useful as it is as a starting point for a critical examination of the whole matter. Three points, in my view, must be made.

Reaching his conclusion, Temin says that 'market prices moved together'. There is, of course, no other way to demonstrate interconnection among markets that were far apart. Yet, on this matter, Temin offers not a shred of evidence, for the simple reason that there are no sources that could provide any. In 2004, when David Jacks scotched the doubts expressed by Allen and Unger about the integration of markets in Baltic and North Sea towns during the seventeenth and eighteenth centuries, he made the initial comment that it is not enough to note that prices differed. One must also take account of transport costs, or more generally of all transaction costs, between those towns that were most advantaged by their positions and the others.⁹ Next, Jacks collated the prices of wheat and rye from four or five towns over a period of three centuries, and from a few more for the eighteenth century. By calculating the variance factors mathematically, he drew up graphs showing the trend towards greater integration and the level of it in relation to later references. This enabled him to demonstrate that this integration, on the increase from 1500, had been disrupted about 1650, before increasing again in the first half of the eighteenth century and reaching a very high level in the second half. Any attempt at doing something comparable for the ancient world is bound to fail. In fact, as Bang aptly puts it, 'Temin's case, however, rests on little more than the widespread existence of prices and markets within the empire. This, in his eyes, constitutes sufficient evidence that the imperial economy was organized as an interconnected market system resembling Europe and the Americas in the eighteenth century. But this is to jump to conclusions.'¹⁰

By managing only to show the existence of prices and the role of supply and demand in the Roman economy, while offering no evidence for any generalized integration, Temin has gone to much trouble to refute ideas that were never Finley's. On the contrary, thirty years before, Finley had rather vehemently distanced himself from Polanyi on the very matter of price regulation by supply and demand. Not only did Finley see this as the way in which the

⁸ Arnaud (2008: 131–2): the words *praeter onera fiscalia quae formam suam optinent* ('except for cargoes of tax goods, which observe their own rules') were added to the price of all loads bound for Rome. The state also had the option of requisitioning shipowners: *Dig. XIV. 2, 10, si prior nauta publice retentus...*

⁹ Jacks explains this by the simple formula: $P_1 = P_2 + t$ (P_1 being the price at point 1, P_2 the price at point 2, and t the transaction cost). Cf. Bang (2008: 154).

¹⁰ Bang (2006: 54).

Athenian economy functioned, but the mechanism had been conceptualized: 'Price variations according to supply and demand were a commonplace in Greek life in the fourth century BC.' To this Finley added a footnote:

I should perhaps not have bothered with these seeming platitudes, were it not that Karl Polanyi... makes the strange remark that 'the supply-demand-price mechanism escaped Aristotle. The distribution of food in the market allowed as yet but scant room to the play of that mechanism.... Not before the third century BC was the working of a supply-demand-price mechanism in international trade noticeable.' How wrong that is will be evident from [different texts from Lysias, Demosthenes, and Pseudo-Demosthenes].¹¹

Clearly, what was true of Athens in the fourth century BC still held good in the Roman world. In Latin, to speak of the threat of shortages, the idea was expressed as 'dearness', *caritas annonae*.¹² Calpurnius Piso, an annalist from the early years of the first century BC, tells us of Romulus, who, as a guest at the house of friends, was joshed one evening for having drunk very little wine: 'If everyone did as you do, wine would be cheaper.' To which he replied, 'On the contrary, it would be dear if everyone drank his fill, because I have drunk my fill.'¹³ There could be no more compact exposition of the law of supply and demand, no more concise way of saying that it applies to goods in short supply and that, on that evening, the degree of marginal utility of wine was lower for Romulus than it was for the average consumer.

No one now doubts that economic life in Roman cities was monetized.¹⁴ It is clear that their inhabitants felt they were living in a milieu in which the economy was primarily (but not exclusively) based on prices that were the outcome of an equilibrium between supply and demand, but with variations dependent essentially on things affecting supply, such as good or bad harvests, hoarding, or weather that was favourable or unfavourable for shipping.¹⁵ Discussions about how to define the proportion of goods not subject to this law, because of free distributions or for other reasons, the role of autarky in agricultural enterprises, and how accurate landowners were in their forecasts, do not invalidate the principle, to which Temin's examples add nothing new.

¹¹ Finley (1970: 13–14, and n. 45).

¹² See Corbier (2005: 258–60), for an excellent analysis; and, whatever interpretation is put upon the legislator's intention, the texts quoted by Lo Cascio (2006: 230–1).

¹³ Quoted by Aulus Gellius, *NA* XI. 14, 2. See also Nicolet (1988: 167–8), for citations from other corroborating sources.

¹⁴ Veyne (2001: 139, n. 22 (1979a)) says that, having read the *Digest* in the light of Marc Bloch's argument that mentions of monetary exchanges in documents from the Middle Ages often mask the bartering of things, he concluded: 'The *Digest* gives the impression of a completely monetized society and I had to abandon my initial scepticism.'

¹⁵ Nicolet (1988: 176), comes to the same finding though working from different sources. See also the examples quoted by De Ruyt (1983: 357).

My final comment goes beyond all this. Finley was not the originator of the expression 'an enormous conglomeration of interdependent markets'. It is, in fact, a quotation from the great book by Lord Roll, *A History of Economic Thought*, which went through many editions between 1938 and 1992.¹⁶ Finley asked why the Ancients, in particular Aristotle, had written no work marking off economic thinking from matters such as domestic management or moral conduct. By way of seeking an answer, and needing a definition of the object of modern economic science, he borrowed one from Roll, making plain that it struck him as being broadly acceptable to economists. It ran as follows: 'If, then, we regard the economic system as an enormous conglomeration of interdependent markets, the central problem of economic inquiry becomes the explanation of the exchange process, or, more particularly, the explanation of the formation of price.' From this, Finley concludes: 'But what if a society was not organized for the satisfaction of its material wants by "an enormous conglomeration of interdependent markets"? It would then not be possible to discover or formulate laws ("statistical uniformities" if one prefers) of economic behaviour, without which a concept of the "economy" is unlikely to develop, economic analysis impossible.'¹⁷ In Finley's view, the lack of a conglomeration of interdependent markets in Antiquity explains the lack of a separate line of economic thinking; and, conversely, he saw the lack of an idea of an economy in the modern sense as a sign that there was no great unified market.¹⁸

This choice of Finley's was unfortunate.¹⁹ Roll's sentence is in no way an attempt at a general definition of the object of modern economic science. It belongs in an introductory passage from the chapters on the transition from classical economic theory, about 1870, to neo-classical theory, known as marginalism.²⁰ It is only the third point in a list of the principles underlying this new way of thinking that would make it possible to conceive of the economy in mathematical terms. Roll spells out these principles, or rather assumptions, as follows:

[1] In regard to the goods and services which individuals require directly for the satisfaction of their wants, the general purchase-and-sale character of individual behaviour is easy to recognize;

[2] But even the transactions of the productive process are seen to resolve themselves into the purchase and sale of raw materials, capitals goods, money capital, and labour;

¹⁶ Roll (1992: 338).

¹⁷ Finley (1985: 22 (1975b: 22)).

¹⁸ Restated in the chapter 'Further Thoughts' (Finley 1985: 176–9).

¹⁹ The standard definition given in handbooks is by Lionel Robbins: 'Economics is a science which studies human behaviour as a relationship between ends and scarce means which have alternative uses.' But this is a definition that could not help explain how Aristotle's analysis was limited by the historical context.

²⁰ Roll (1992: 338).

DIVERGENT OPINIONS

Other authorities had previously taken up positions radically opposed to Temin's. Jeremy Paterson, for example, saw the Roman economy as being based on a 'network of micro-regional economies... designed essentially to meet local needs. But at certain periods some of these economies become more closely linked with the wider world and find a wider market for their goods.'²⁶ Ten years earlier, Drexhage had studied evidence on prices provided by papyri dating from the first to the third centuries AD found in the Fayum region. He noticed great differences in prices; information seems not to have been circulated widely, as travellers express surprise about the price of this or that commodity in the town where they are, and private letters speak of low or high prices obtaining at a few dozen kilometres from the recipient, who was quite unaware of this.²⁷ According to Drexhage, these findings coincide with two texts, one from the jurist Gaius: 'prices of articles vary in different cities and provinces',²⁸ and the other from Pliny the Elder:

We are not unaware that the prices of articles which we have stated at various points differ in different places and alter nearly every year, according to the shipping costs or the terms on which a particular merchant has bought them, or as some dealer dominating the market may whip up the selling price. (trans. H. Rackham)²⁹

Drexhage concludes as follows:

Gaius and Pliny show in this way that they did not conceive of the Roman Empire as an economic unit with a global market and everything that implies. Instead, for many reasons, the economy was more or less composed of countless small geographical areas (as well as variations in time); and these 'autonomous units' became apparent in differences in prices and remunerations.

The inhabitants of the Roman Empire were assuredly aware that they lived in a world of unequal and changing prices. The jurist Paulus knew perfectly well that the price of oil was not the same in Spain, where it was produced, as it was in Rome, and that it was also affected by year-to-year variations in crop yield, by lean years of drought and the years of plenty.³⁰ However, this does not

²⁶ Paterson (1998: 164).

²⁷ Drexhage (1988); Bang (2006: 64–70) located other papyrus sources that enabled a more systematic study of prices in roughly the same region in the late fourth century and in the fifth, leading to the conclusion that there was no correlation between seasonal variations in the prices of wheat and barley in the three towns.

²⁸ *Dig.* XIII. 4, 3.

²⁹ Pliny, XXXIII. 164: *Pretia rerum... non ignoramus alia aliis locis esse et omnibus paene mutari annis, prout navigatione constiterint aut ut quisque mercatus sit aut aliquis praevalens manceps annonam flagellet.*

³⁰ *Dig.* XXXV. 2, 63, 2. Cf. XIII. 3, 4.

mean that the markets were not integrated. Gaius' point fits with David Jacks' formula: $P_1 = P_2 + t$.³¹ the differential between oil prices in Baetica and in Rome did not, for example, prevent them from varying in conjunction with each other. Pliny stresses the role of climatic and personal uncertainties in influencing prices; but this does not rule out interdependent effects over time. Temin accepts that, during the pre-industrial era, such correlations happened only very slowly. If we leave aside the question of the general conditions, which Peter Bang has just revisited in a wide-ranging book, some of whose points of view and conclusions coincide with my own, one may wonder whether the evidence available to us justifies any geographical construct with definable interconnected zones, or separated zones, or both. The archaeology of distribution is relevant here, especially because the wide dispersal patterns of some pottery and amphorae have often been seen as evidence for the existence of a huge market.³²

ARCHAEOLOGICAL EVIDENCE AND ITS INTERPRETATION

Evidence from archaeology should, however, be entertained with some caution. Distribution maps without quantification give the same importance to the discovery of one or two fragments and the discovery of hundreds or thousands. This can lead to an impression of very widespread distribution, for it is a fact that quite a lot of amphora types can be found all over the place, though in barely perceptible quantities. In such cases, to speak of deliveries or commercial exchanges for the regularity of which there is no evidence seems to me to be drawing too long a bow. Ulrike Ehmig, in a work on amphorae from Mainz that is in many respects exemplary, lists 1,573 fragments from Baetican oil amphorae, seven from oil amphorae from Africa Proconsularis, and four from Tripolitania.³³ Though one may well wonder about the circumstances under which these African amphorae came to Mainz, it is unjustified to conclude that African oil was being exported there; but it can be argued that oil from Baetica clearly was. The many publications that make much of a type of amphora found along coastlines all over the Mediterranean, while giving no figures for them, must be handled with care. Other things that have to be taken into account are the ports of call, the jettisoning of shipboard amphorae once their contents had been used, the occasional unloading of a few, and the mariners' portage, which allowed crews to engage in small-scale

³¹ See p. 74, n. 9, and Persson (1999: 91); Erdkamp (2005: 199); Bang (2008: 154).

³² e.g. Parkins (1998: 8); Hingley (2005: 105–14).

³³ Ehmig (2003: 17, 27, 36, 45).

deals of their own. The status of what archaeologists call secondary cargo is more ambiguous; this is what Sallust defines as the *supervacuanea onera*: 'Men like Lucius Postumius and Marcus Favonius seem to me like the superfluous cargo of a great ship. When they arrive safely, some use can be made of them; if any disaster occurs, they are the first to be jettisoned because they are of least value' (trans. J. C. Rolfe, adapted).³⁴ They were items that were sometimes taken on board to fill up empty space amid the main load or else carried as deck cargo. Items of secondary cargo, in particular pottery, may have been traded in large numbers, using space left by the amphorae: it would have been very simple to slot boxes of pots between their feet or set them on top of the layers of amphorae filling the hold, which could not be stacked without leaving some room above them. Such cargo could be carried at very low rates. Massive exports of Campanian pottery, for instance, were conveyed in just that manner, for two centuries during the Republic, as Jean-Paul Morel and Franca Cibecchini have recently reminded us.³⁵ In similar conditions, however, products could be shipped for merely occasional trade. On the Albenga and Giens wrecks, as well as Campanian pottery there were cooking vessels, whose export to Gaul must have been occasional.³⁶ The balls of Egyptian blue made in Puteoli and found in three wrecks (Planier 3, Giens, and La Chrétienne M)³⁷ can be considered as occasional cargo of almost negligible weight and bulk, which is why they are found along the coasts of the western Mediterranean. The cargo of the Arles IV wreck, the surface of which was photographed by submarine at a depth of 662 metres, off the mouth of the Rhône, is identical with that of several large vessels from Baetica: amphorae of different types and metal ingots. However, as Luc Long says in his account of it, 'along the periphery of the site are several amphorae typical of the Ibiza region or the Balearics, meaning the ship had called at the islands'.³⁸ It is impossible to tell whether they were shipboard amphorae, for consumption by

³⁴ *M. Postumii, L. Favonii mihi videntur quasi magnae navis supervacuanea onera esse: ubi salvi pervenire usui sunt; si quid adversi coortum est, de illis potissimum jactura fit, quia pretii minimi sunt* (Sallust, *Ep. ad Caesarem*, 9, 4). Cf. Nieto Prieto, in Nieto Prieto et al. (1989: 239–44).

³⁵ Cibecchini (2004); Morel (2007: 508–9; 2008: 165–9). Morel (1998a: 504–5) argued that it was possible there were cargoes consisting entirely of Campanian pottery. It is a question that can certainly be raised in connection with the Riou 1 and Punta Scaletta wrecks (Parker 1992: nos 986, 960), though the excavating conditions conduce to no clear answer. On the Punta Scaletta wreck, eight anchors have been found, which means it was a very large ship that would have, or should have, been capable of carrying several hundred thousand pieces of pottery, difficult though this seems.

³⁶ Giacobbi (1978).

³⁷ Tchernia (1968–70); Joncheray and Joncheray (2002: 85). The Egyptian blue from the Giens wreck, discovered in the stern, remains unpublished. That it may have been part of the shipboard materials cannot be ruled out. The question also arises with the four balls from La Chrétienne M.

³⁸ See *Bilan scientifique* (1994: 30); also Long and Illouze (2004: 304–5).

the crew, or intended for sale; but, in any case, any trade in them was entirely occasional. Even wrecks, if they are to be seen as having true economic significance, must either be fitted into categories or be supported by evidence from excavations on land.

Care should also be taken to keep luxury products well separated from items that were being carried in bulk. All over the Empire, there were some extremely wealthy personages who could order whatever they liked from anywhere. On an amphora recovered from the bed of the Rhône at Arles, containing 'the finest two year old mackerel *garum*', a product of great quality, the spot where the trader's name is usually written is occupied by the dative form of the name of the Governor of Raetia in AD 77–8, C. Satrius Secundus.³⁹ What this means is that he had ordered it directly from Baetica and that the amphora was already his property during the voyage. At Augsburg, the capital of Raetia, two other amphorae have been found, also bearing the name C. Satrius Secundus in the dative, though below the trader's name: they, too, were an order, though not as direct.⁴⁰ Although amphorae from Baetica for the carriage of various sorts of salted fish or fish sauces quite regularly turn up in Raetia, these two are, I believe, the only published ones with the exact shape of the one from Arles, Dressel 12.⁴¹ In this type of trade, the transaction cost is of no importance. The words used by Frédéric Mauro about the sixteenth century can apply here too: "There was a class who could consume at any price. Hence the huge divorce between two markets which were out of all proportion with one another: the market for the rich and the market for the poor."⁴² The rules that obtained in one of them did not obtain in the other.

So, working my way through the ever more impenetrable thickets of the literature on the distribution of amphorae and pottery, I propose to examine the matter of the interdependence of markets by looking at two examples featuring products of daily consumption, wine and oil.

Wine after AD 79

In AD 79, the eruption of Vesuvius buried under 6 metres of ash and lapilli the great vineyards that stretched across the slopes of the volcano and all the way down to Pompeii and Stabiae. The destruction had a far-reaching impact on the whole wine economy of Italy. An earlier suggestion of mine was that a great rise in prices, affecting even Rome, was the impetus for increasing the area planted with vines in other regions, to the point of setting off a crisis twelve to fifteen years later, as is evidenced by edicts of Domitian aimed at prohibiting further plantings in Italy.⁴³ There is an exact parallel with French

³⁹ Ehmig, Liou, and Long (2004).

⁴¹ See Schimmer (2009).

⁴⁰ Ehmig, Liou, and Long (2004: 128; figs 5 and 6).

⁴² Mauro (1981: 172).

⁴³ Tchernia (1986: 221–32).

wine-growing after the great frosts of 1709, which were so destructive that wine prices quadrupled and people set about feverishly replanting. Sixteen years later, in 1725, some *parlements* limited vine plantings in their locality; and in 1731 this measure was extended to the whole kingdom.⁴⁴ This was the sort of situation in which we see, during the Flavian period, a very sharp increase in consignments of wine amphorae arriving in Rome from the Tiber valley and southern Gaul. The stratigraphy of excavations in Rome shows that the percentage of those from the Tiber valley tripled (at 18 per cent, they have become the majority type of the amphorae located), while those from southern Gaul quintupled to 7 per cent of all amphorae and 25 per cent at Ostia.⁴⁵ The drop in production in Campania, with the resulting price rise, caused wine-growers and wine merchants in Sabina, Umbria, Etruria, and even in Gallia Narbonensis to increase their production and their sales to the capital of the Empire. This implies a market effect all over central Tyrrhenian Italy that affected even the coasts of southern Gaul. How circumscribed these effects were, however, is evident from a letter that Pliny the Younger wrote some years later: everything is in a bad way; his estate in Tuscany has been devastated by hail and the vintage ruined; from his estate in Transpadana he hears that there is a great wine crop, but that the drop in prices is just as great. So this year he expects no income from either estate.⁴⁶ At no time does Pliny consider the possibility of diverting some of the glut from Cisalpine Gaul down into peninsular Italy. Here we have two economic realms visibly separated by solid barriers, something that will crop up again when we discuss oil.

Oil from Baetica, Africa, and Istria

In the second half of the second century AD, oil amphorae from Baetica, Africa Proconsularis, and Tripolitania were arriving in Rome.⁴⁷ Those from Baetica were the most numerous, though there were also substantial numbers of the others, and even more of them at Ostia. Inevitably, there were great differences between the oil prices that applied in such places of high production and those in Rome. Despite this, it can be assumed that there was interaction between prices in Rome, where very large quantities were imported, and those in the production areas.⁴⁸ This does not take us very far towards an integration of a set of diverse markets. However, it may be possible to tease out this line of thought a little further. Let us suppose there is a poor harvest in North Africa.

⁴⁴ Essential reading on this is Lachiver (1988: 324–36).

⁴⁵ Panella (1992; 2001: 195); Rizzo (2003: 144–67, 206–12).

⁴⁶ IV. 6: *Tusci grandine excussi, in regione Transpadana summa abundantia, sed par vilitas nuntiatur.*

⁴⁷ Rizzo (2003: 220–2; Revilla Calvo (2007).

⁴⁸ Harris (2007: 515).

This is going to make for substantial increases in consignments of oil from Baetica to Rome and cause a rise in prices not only in *Lepcis Magna* and Carthage, but also in *Gades*, *Hispalis*, and *Corduba*, which may have knock-on effects in oil-importing places. Consumption in Rome could lead to correlation of oil markets in the three exporting regions.

As for which areas were affected, it may be noted, leaving aside Rome, that oil from Africa Proconsularis was sporadically present, though in fact rare outside the Tyrrhenian Sea before the third century.⁴⁹ Most wrecks carrying such amphorae have been found in waters near Sicily.⁵⁰ Only two are attested north of Rome, one at Grado, near the harbour at Aquileia, and the other at Procchio on Elba. In neither case were the amphorae carrying their original contents: at Grado, traces of salted fish were found; and at Procchio, fig pips.⁵¹ The amphorae were being reused; and we do not really know where the original oil was unloaded. The Procchio wreck, however, must be set alongside discoveries of African amphorae of type I in northern Etruria, some of them in the villa of S. Vincenzino at Caecina⁵² and quite a lot at Luni.⁵³ Strabo says that Liguria imported oil.⁵⁴ Sardinia, too, had few olive trees; and second-century amphorae from Africa Proconsularis, Tripolitania, and Baetica turn up in roughly equal numbers in excavations at *Turris Libisonis* (Porto Torres).⁵⁵ Lastly, recent discoveries have brought to light a substantial sample from Marseilles.⁵⁶ In every one of these places, we could be dealing with amphorae sent on from Rome, especially along the coast and as far as Marseilles, as return cargo on vessels that had originally brought wine from Gallia Narbonensis.

Oil from Tripolitania contributed to the supply to Egypt. In what measure, it is difficult to say, though it was presumably to a lesser extent than oil from Baetica.⁵⁷ It has been recorded in many Mediterranean ports, though never in any great quantities. It was carried mainly to Rome. There are, however, about forty amphorae in Pompeii: 'an insignificant number in view of the amount of evidence offered by other imported amphorae, but sufficient as proof of organized trade,'⁵⁸ wrote Clementina Panella. I shall come back to this.

As for the oil from Baetica, it was distributed to a very much wider market. Since a significant proportion of these amphorae are stamped, and it is a

⁴⁹ See Stone (2009) for a listing of stamps.

⁵⁰ Auriemma (1997); Bonifay and Tchernia (2012). The Giannutri wreck (Celuzza and Rendini 1992: 99–305) is disputed by Auriemma (1997: 135–6).

⁵¹ Parker (1992: 343); Auriemma (1997).

⁵² Paoletti and Genovesi (2007).

⁵³ Lusuardi Siena (1977: 214).

⁵⁴ Strabo, IV. 6, 2.

⁵⁵ Villedieu (1984).

⁵⁶ Lang-Desvignes (2008).

⁵⁷ Will (1983) has catalogued about eighty stamps on Dressel 20 amphorae held by the Alexandria National Museum (see p. 272). On African amphorae in the eastern Mediterranean, see Bonifay (2005: 70): 'Throughout the second and third centuries, evidence for the presence of classical African amphorae remains rather anecdotal.'

⁵⁸ Panella (1977: 147).

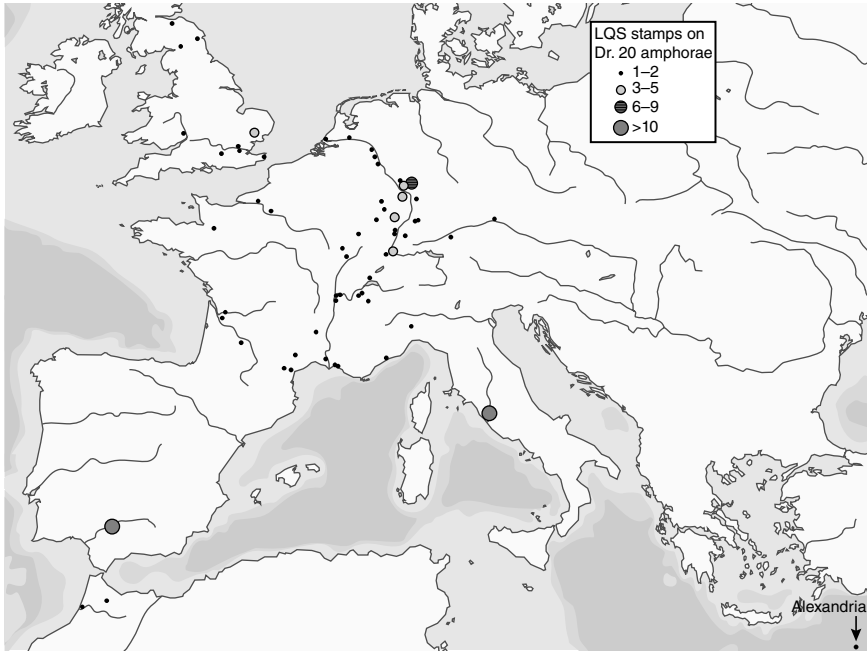


Fig. 3.1. Distribution map of the *LQS* stamp on amphorae from Baetica in the second century AD. (By Mireille Pagni, adapted from Ehmig (2003: 114))

long-standing practice to publish the stamps, the distribution maps that plot their whereabouts are a convenient resource. They can serve, albeit interpreted with some caution, as representative indicators. A glance at the map of the quantified distribution of a stamp from the second century (Fig. 3.1) shows that, in the scenario imagined above, a derivative effect on oil prices might have been seen as far away as the camps and towns of Germania and Britannia, and possibly even Alexandria. At the same time, the very circumscribed limits of the affected areas should be noted.

Stamps on Baetican oil amphorae, the Dressel 20s, are much less frequent in Italy than in Gaul or Germania; and the few that exist are concentrated especially in two areas: Liguria, where there are twenty-two stamps at eight sites, in particular five at Dertona and seven at Alba, and the environs of Rome.⁵⁹ In all, there are a few dozen of them, as against the 1,130 of them that

⁵⁹ On stamps and amphorae in Liguria, see Pesavento Mattioli (2000: 740–2) (plus nine more stamps in Cisalpine Gaul), and Lusuadi Siena (1977) for the Luni amphorae. Fragments of Dressel 20 amphorae are to be found in the villa of Settefinestre near *Cosa* (Carandini 1985: iii. 80–1, 89) and at several points on the Tyrrhenian coast (Panella 2001: 203–5) in particular in northern Etruria (Pasquinucci, Del Rio, and Menchelli 2000). To my knowledge, apart from these, stamps have been found at Pompeii and at Stabia, at Veii, Cesano (near Veii), Velletri, *Ferentinum*, Licenza, *Cosa*, and Cortone.

Garrote Sayó has counted in Gallia Narbonensis.⁶⁰ We know from Strabo and Columella that olive trees were plentiful in Sabina;⁶¹ and a good number of oil-processing facilities have been discovered close to Rome.⁶² Peninsular Italy appears to have provided the bulk of its own oil consumption from each of its regions, save for Liguria; Sabina certainly took part in supplying the capital with oil, conveyed in goatskins which have disappeared without leaving any traces behind.

In Spain, north of Cartagena, 59 different stamps have been listed and described by Márquez Villora and Molina Vidal, and 102 by Berni Millet.⁶³ Of the twenty Catalanian sites where Berni Millet has identified stamps on Dressel 20 amphorae, the vast majority are right on the coast; others are in its immediate vicinity; a single one was found in an inland town, *Ilerda* (Lleida). More than half of the total number were found in Ampurias (a fact attributable in the first place, of course, to the extent of the excavations). The four sites mentioned by the author as being in the same region but situated a little away from the coast (30–40 kilometres from the sea) have provided only a few fragments and one stamp at Girona and one or two sherds elsewhere. Much the same can be said of the area between Cartagena and the Ebro, bearing in mind that a fair proportion of the stamps published came from wrecks. M. Beltrán Lloris, who, for his part, has made a study of the general dispersal of all the Dressel 20s, stamped and unstamped, in Hispania Tarraconensis, comes to a similar conclusion: that there is not much evidence that they penetrated far from the coast, even along the valley of the Ebro. This situation differs only in the north-west, where a more notable amount of oil from Baetica was delivered to the mining area of Astorga and the military encampment of León, both lying beyond the olive-tree line. Beltrán Lloris is of the view that, in other parts of the country, demand for oil was met by local production.⁶⁴

There are many more Dressel 20 amphorae spread over a much larger area in Gaul; and it took very large numbers of them to supply the German *limes* and Britannia.⁶⁵ One thing that is remarkable is the total lack of stamps on the left bank of the Rhône between the confluence with the Isère and the coast. In the south of this area, a good many Roman villas had oil presses. Development of production at one of these villas, Saint-Michel at La Garde near Toulon, was

⁶⁰ Garrote Sayó (2000).

⁶¹ Strabo, V. 3, 1; Columella, V. 8, 5. Cf. Galen VI. 196, 220, 287; X. 392, 577, 822; XI. 869, 872.

⁶² Brun (2004: 10–11).

⁶³ Márquez Villora and Molina Vidal (2005); Berni Millet (1998).

⁶⁴ Beltrán Lloris (2000: 477–86).

⁶⁵ Fig. 3.1; Étienne and Mayet (2004: 198–240); for Gallia Narbonensis, see Garrote Sayó (2000); for Germania, Remesal Rodríguez (1986), Martin-Kilcher (1987), and Ehlig (2003), whose maps of stamp distribution patterns are especially helpful; for distribution in Britannia, see Carreras Monfort and Funari (1998).

constant from the start of the common era till the second century, and it eventually had six presses working. At another one, in Alpes-Maritimes, there were three presses, described by J.-P. Brun as being 'on the scale of large installations in oil-growing areas'.⁶⁶ The amphorae from Baetica that were transported up the Rhône to be sold in large numbers at Orange and Vienne sailed past regions supplied by oil from these villas. On the other hand, olive-growers and traders in Gallia Narbonensis took no advantage from their greater geographical proximity to attempt to participate in supplying Gallia Lugdunensis, Belgica, or Germania. There is no such thing as an oil amphora from Gallia Narbonensis. And, yet, olives preserved in amphorae from southern Gaul were strong competitors with olives from Baetica, amounting to about a quarter of the total loads delivered to Mainz and a sixth of those arriving at Augst.⁶⁷ The conclusion is that, as far as oil is concerned, from the very first days of the Germanic *limes* under Augustus, the market was divided, a state of affairs that was never to change. Oil consumed in eastern Gallia Narbonensis was of local provenance and carried in skins.⁶⁸ The area remained impermeable to the great imports of oil from Baetica, as the areas northward were to oil from Gallia Narbonensis.

We reach a similar conclusion by examining the area that consumed oil produced by the last of our major growing regions of the Roman west, Istria. The literary texts speak of Istrian oil and Baetican oil in similar terms.⁶⁹ The map in Fig. 3.2 compares the distribution of the two most widespread stamps, C. Antonius Quietus from Baetica and C. Laecanius Bassus, the consul of AD 64, from Istria. They are roughly contemporary. The division into two sharply defined areas is immediately obvious, despite one area of overlap limited more or less to Raetia.⁷⁰ A complete inventory of all Dressel 20 amphorae in northern Italy has been done by Stefania Pesavento. Outside Liguria, she notes six sites in Padania and three in Aquileia, with a single stamp in each. When

⁶⁶ Brun (2005: 78–101 (98)).

⁶⁷ Ehmig (2003: 27, 36, 38, 52–6); see also Martin-Kilcher (1994: 391–2, 476–7). The olive amphorae from Baetica are Haltern 70s, and those from Gallia Narbonensis are Augst 21s.

⁶⁸ Brun (2005: 100).

⁶⁹ Martial, XII. 63, 1–2; Pliny, XV. 8; Pausanias, X. 32, 19. Cf. Apicius, I. 4; Galen, VI. 196; X. 790, 791, 822; XI. 869, 871.

⁷⁰ Publications on the amphorae from *Cambodunum* (= Kempten in Raetia; see Schimmer 2009) and a recent investigation by Ulrike Ehmig (2007) on the amphorae dating from the period of Augustus in Noricum confirm this picture and add detail. In the Augustan camp at Dangstetten, downstream from Lake Constance, near the confluence of the Aar, the bulk of the oil was from Baetica (although there was wine from the Adriatic in substantial quantities). As well, Dressel 20 amphorae went up towards the Danube or beyond Lake Constance, coinciding with amphorae from Istria. The Dressel 20s are still a large majority at *Cambodunum* (being six times more numerous than the Dressel 6Bs from Istria) and at Chur (Martin-Kilcher 1991: 122–4; Tassaux 2004a: 184). After the middle of the second century, a few amphorae from Baetica begin to turn up in Pannonia (sixteen stamps); see Bezeczky (1995) and Tassaux (2004a).

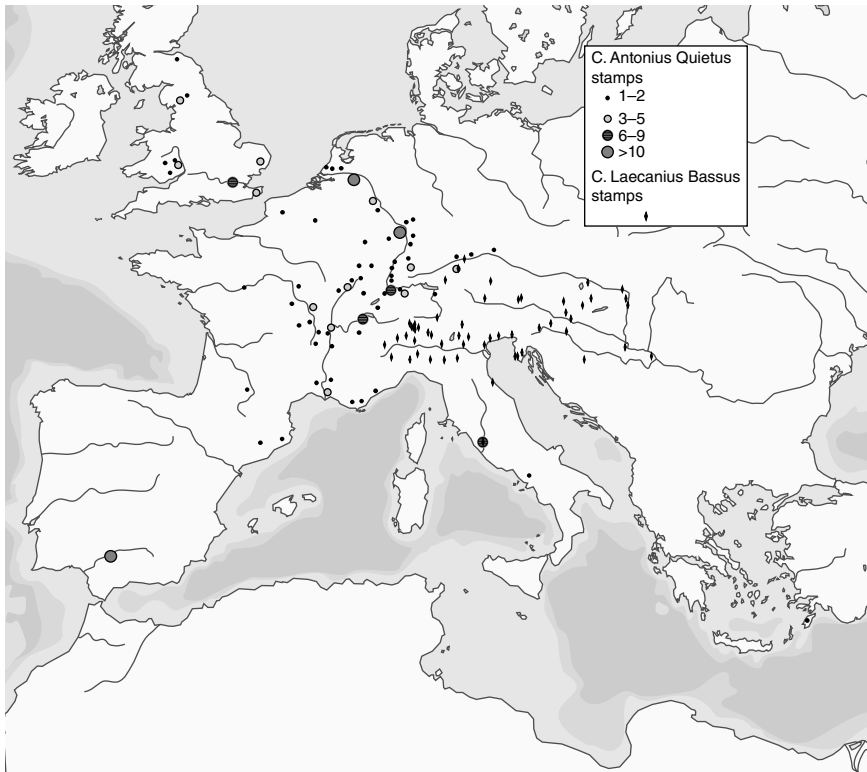


Fig. 3.2. Comparative distribution map of stamps of C. Antonius Quietus on amphorae from Baetica and of C. Laecanius Bassus on amphorae from Istria (second half of the first century AD). (By Mireille Pagni, adapted from Ehmig (2003: 110), quantified map, and Bezeczky (1998: 75), unquantified map)

the sherds are counted, they range from one to three.⁷¹ There was thus distribution of oil from Baetica over a wide area of northern Italy, but it was extremely sparse.

As for oil from Africa, its presence could appear to have been just as minimal, at least until the third century,⁷² were it not for the Grado wreck,

⁷¹ Pesavento Mattioli (2000). In the Aquileia museum, Cipriano and Carre (1987: 485–6) note that small numbers of Dressel 20s were attested. In a more recent update on imports to Aquileia, drawing on excavations in the river port, Carre et al. (2007: 586, fig. 2) state in the legend to their graph: 'We have omitted production from Tyrrhenian Italy and Spain, represented by too few sherds.' The authors do, however, mention the possibility that the area excavated may have been a wine port.

⁷² In the Aquileia museum, there are a few second-century amphorae from Tripolitania and Africa Proconsularis; see Cipriano and Carre (1987: 486–7) and Tassaux (2004b: 28, 31).

which foundered about the middle of the second century AD on the coastal approaches to Aquileia. The entire load carried by this ship was salted fish in reused amphorae, among them about 200 oil amphorae from Africa Procon-sularis and several dozen from Tripolitania.⁷³ Despite the spectacular nature of this find, such reused amphorae do not require us to vary the conclusions drawn from the excavations at Aquileia: oil from Africa arrived there, but in very small quantities until the third century, if not the fourth.⁷⁴

In the first century and for virtually all of the second, Transpadana, the Veneto, the Danube provinces (apart from the shared area in northern Raetia and in Noricum), and Illyria were all part of the distribution zone for oil from Istria. On the other hand, and crucially, there were no sales in Rome of amphorae from Istria,⁷⁵ although at that same period wine from the Ravenna area, which faces Istria just across the Adriatic, was being imported to the capital in substantial quantities. As was the case in Gaul, the clear picture is that there were separate marketing arrangements that went unchanged for a long time. Our hypothetical scenario of a bad harvest in Africa would have had no effect on prices in most parts of northern Italy and the Danube provinces, nor even in eastern Gallia Narbonensis, central Hispania Tarraconensis, or many areas of peninsular Italy.

These observations could not be seen as having more general relevance unless or until they were supported by many other examples. Marketing networks for salted fish, pottery, and even wine were not identical with those for oil. Olive-growing is much more circumscribed by climate than vine-growing, which over the years may have spread far to the north. There are, however, a few points to be made, which may even serve as controls against which to assess trade in other goods.

The major oil-producing regions all had points of distribution in Rome or with the armies stationed along the frontiers, or both. The supply chains that fed these markets were at times extremely long. Along the way, or off to the side of it, were branch lines leading to several large coastal or riverside towns. Some of these places played a role in redistribution towards secondary towns close by. This function was served by Narbo for Ampurias and the Garonne, by Genoa for several towns in the Ligurian hinterland, and by Puteoli for Pompeii.⁷⁶ Whole regions were, however, unaffected by all this and made do

Importation was minimal at least up to the middle of the second century; see Carre et al. (2007: 608).

⁷³ Auriemma (1997). See p. 83.

⁷⁴ Tassaux (2004a: 190); Carre et al. (2007: 605–17).

⁷⁵ Rizzo (2003), 160–1, 220. We have to see the stamp of C. Laecanius Bassus shown in Fig. 3.2 as an anomaly, perhaps attributable to a single load ordered by the consul for his house in Rome, a practice described by Whittaker (1985).

⁷⁶ For this secondary redistributing trade, see Nieto Prieto, in Nieto Prieto et al. (1989: 239–344); also Nieto Prieto (1997).

with less extensive local or regional markets. A single one was supplied from external sources without benefit of the attractive power of Rome and the armies: the Po plain, with its easy access from Istria by sea and river. This was a world of differences and inequalities.⁷⁷

When the supply lines intersected, the exorbitant and more pressing demand from Rome probably meant that the city had a determining influence on price movements in the network concerned. Rome was the market of the world; but Rome was not Amsterdam. Its economic impact was due only to the exceptional influence of its consumption. The redistributive function of its ports was secondary and occasional, linked mainly to return cargoes.⁷⁸ But, in seventeenth-century Amsterdam, three-quarters of the grain arriving there was re-exported elsewhere.⁷⁹ There was no policy of making Rome a clearing house with a determining effect on prices in various different markets, as was the case in Holland. Nor is there any valid comparison between the Roman Empire and northern Europe in the eighteenth century: a series of cities neatly arranged along the Baltic and the North Sea, over a distance that is nowhere near even half that between Cadiz and Antioch, and bounded by only eight meridians of longitude instead of more than thirty, more than fifteen of which cover only the Mediterranean. At that time, this network of maritime cities was utterly unrepresentative of Europe as a whole, which even in the late eighteenth century was dominated by fragmented markets. Jacks urges caution: 'It should be made clear that what is being argued here is not that the entirety of Europe had become engrossed in a complete and overarching system of markets.'⁸⁰ There are even fewer grounds for falling into such a trap when discussing the Roman Empire.

MODES OF TRANSPORT

From Plato and Aristotle to Gregory of Nazianzus, inland towns were seen as hemmed in, as opposed to maritime towns, which were open to trade.⁸¹ It is

⁷⁷ On this, see, e.g., Hopkins (1983); Leveau (2007: esp. map 24); Migeotte (2008: 78–80) for the eastern part of the Empire. Erdkamp (2005: 197–8) and Andreau (2007b, 2008) confirm Cicero: there was presumably a unified grain market in Sicily, but not in Asia Minor, where prices varied from one town to another.

⁷⁸ See pp. 116 and 271–2.

⁷⁹ Glamann (1977: 223).

⁸⁰ Jacks (2004: 300). Cf. Bang (2008: 31).

⁸¹ One might even say this obtained up to and including Adam Smith (1776: bk II, ch. 5): 'The neighbourhood of the sea coast, and the banks of all navigable rivers, are advantageous situations for industry, only because they facilitate the exportation and exchange of such surplus produce for something else which is more in demand there.'

likely that this was something of a commonplace. Peter Garnsey's view is that Gregory of Nazianzus is exaggerating when he says, of a famine in Caesarea in Cappadocia:

The city was in distress, and there was no source of assistance from anywhere, nor any relief. Maritime cities are able to bear such times of need without difficulty, because they can hand over their own products in exchange for what comes in by sea: but an inland city like ours can neither turn its superfluity to profit, nor supply its need, by either disposing of what we have, or importing what we have not.⁸²

In cases of extreme shortage, Garnsey explains, the price of wheat rose and it became profitable to import provisions from great distances away.⁸³ This economic mechanism, however, did not always function properly; and we remain in complete ignorance about the diet of the poorest people. As I stated above, along the Spanish eastern seaboard and Catalonia, Dressel 20s are to be found mainly within some tens of kilometres of the coast; and, beyond that limit, they are few and far between. Here is the view of a scholar with extensive field experience in Africa giving the example of two sites on Cape Bon:

Distribution of African products in Africa shows up an important difference between coastal and inland towns. The point is, though, that in this context the 'inland' is not far away, a mere fifteen kilometres or so from the coast. [The coastal site studied] remained wide open to trade from not only Africa but the Mediterranean as well, whereas the inland site gives evidence of essentially local trading.⁸⁴

There can be no doubt that those who lived in a port or a river city experienced different conditions of life from other people. Temin, towards the end of his article, rightly states that a limitation on the market he envisaged was the difficulty of transporting heavy goods away from the sea or navigable rivers. Despite this, he does not alter his final conclusion. The picture given, however, shows a marked contrast between different areas: first and foremost Rome, where similar items originating from different sources coincided and presumably were in competition with one another; other areas, which drew their supplies from far away but from a single region; and finally those that were almost completely cut off.

In recent times, many arguments have been mounted to restate the importance of land transport.⁸⁵ It is true that price differentials based on the prices set by the *Edict on Maximum Prices* cannot be taken at face value, those relating to maritime deliveries having been demonstrated by Pascal Arnaud to be

⁸² Gregory of Nazianzus, *Orationes*, 43, 34 (trans. EM).

⁸³ Garnsey (1988: 22–4).

⁸⁴ Bonifay (2004: 451–2).

⁸⁵ Most recently by Adams (2007).

‘a bureaucratic construct’.⁸⁶ It is true, too, that, if we take, as Keith Hopkins has done, the total tonnage of goods transported within the Roman Empire for whatever purpose, including daily cartloads from every villa to the neighbouring village or almost as often to the nearest town, we could conclude, albeit with an immeasurable margin of error, that much more was transported by land than by river or sea.⁸⁷ And it is true, lastly, that it was not impossible to transport heavy loads over land. At the emperor’s behest it was even possible to convey columns weighing 30 tons from *Mons Claudianus* to the Nile, on a specially constructed twelve-wheeled cart, drawn along by thirty-nine men and a good number of draught animals, perhaps camels in harness.⁸⁸ The real question at issue, however, is who was capable of affording the sums required. In other words, we need to know what was economically possible, how it was done, with which goods, and for which buyers.

Even those who argue in favour of land transport find they have to hint in passing at the superiority of river transport;⁸⁹ and by and large they show that the Roman Empire was no worse off in this respect than other pre-industrial societies at different periods, including a reminder of the accepted comparison with England in the eighteenth century: if the cost of transporting a load by sea is set at 1, then a river cargo is 4.7, and an overland one is 22.6. Adam Smith in his day had calculated the comparative costs of land and sea transport between London and Edinburgh, coming to this conclusion: ‘Six or eight men therefore, by the help of water carriage can carry and bring back in the same time the same quantity of goods between London and Edinburgh as fifty broad wheeled waggons attended by a hundred men and drawn by four hundred horses.’⁹⁰ Even if Roman draught animals were as good as any others, these basic conditions were unchanged: ‘On a well-paved surface, twenty kilograms of effort are required to pull a ton; by canal, this effort drops to 500 grams. By river, a barge of 280 tons requires only two horses, whereas hundreds would have been needed by road.’⁹¹ There can be no doubt that this provides a key to interpret what archaeological discoveries have suggested about the distribution of transported goods. It is a key, however, that does not open every door. Carriage by sea and by river had constraints of their own. Admittedly, the greater the tonnage, the lower the freight cost, but that meant large quantities of goods had to be assembled ready for loading, so as not to keep a ship tied up. This involved warehouses, a land-based workforce for stocking the goods,

⁸⁶ Arnaud (2007: 333); but see Arnaud (2008) for a slightly less cut-and-dried view.

⁸⁷ Hopkins (1983).

⁸⁸ Bülow-Jacobsen (2009: 206–7 (*O. Claud.* 871), 267–72). Exceptional pillars weighing 100 and 200 tons were presumably moved on rollers. See Adams (2001); Maxfield (2001: 157–65).

⁸⁹ Raepsaet (1987: 21): ‘It is difficult to deny the dominant role played by river transport in long-distance trade’; Polfer (1991: 290); Laurence (1998: 135–6).

⁹⁰ Smith (1776: bk I, ch. 3).

⁹¹ Livet (2003: 50).

and an organization to oversee the dock work. Ports had to be established and maintained; rivers needed to be made usable; towpaths required maintenance. Large-scale trading by sea and river requires heavy infrastructure, which is a public good and cannot be improvised. For short distances, especially for goods that would need to be reloaded onto other vehicles or that are not heavy or cumbersome, wagons may be better suited. And of course wagoning was often integral to river transport, for carrying goods between two rivers or completing the final stage of an itinerary. However, water was the preferred solution whenever possible.

'If demand was strong enough,' says W. V. Harris, 'the costs of land transport could be accepted'.⁹² Demand, whether by land transport or some other sort, depends on prices; and it can fall off when prices are increased by high transaction and transport costs. The lack of elasticity mentioned by Harris to explain the existence of types of trading with high transport costs was in part a function of what particular consumers could afford. It all depended on the value of the goods being carried and the type of customers they were intended for. The price of a chest of silks that had already come from a long distance away and had been ordered by a small number of wealthy clients would not be greatly increased by extra carrying of any kind; nor would the buyers be put off by the expense. On the other hand, the cargo of a ship carrying ordinary wine would be aimed at many more customers who were not nearly as rich and hence sensitive to any price rise. Even if they were very fond of their usual beverage, there could be huge variations in the amounts consumed. Such a cargo would sell much more easily in a large port than in an inland town.

All this is so self-evident that it should be taken for granted. But archaeologists still have to be urged to take account of such distinctions. Amphorae defined as salted-fish containers transported not just salted fish but also *garum*, which was an expensive product, consumed in small quantities. If there is no inscription specifying the contents, we are still unable to distinguish which amphorae contained which. A classification of wine amphorae into those that contained vintages of renown and those that were for table wine would provide a revealing distribution map.

Pottery is generally lumped together with amphorae as indicative of large-scale commercial currents. But it is not the same thing. Admittedly, on sea voyages, it was merchandise accompanying the main cargo; and, on overland journeys, it represented material of little value, while being much easier to transport than grain or amphorae: a 500-kilogram cart could carry at best a dozen amphorae, but about 1,500 terracotta plates. This made for a great many potsherds to turn up in digs and presumably explains why any pottery

⁹² Harris (1993: 27–8; 2007: 535).

with a particular quality that added some value to it was at times very widely distributed in inland areas.⁹³

All in all, not much is known in detail about what proportion of total cost was transport cost in Roman times for different types of merchandise, and even less about transaction costs. General conditions tend to suggest they would have been high. Elio Lo Cascio, while rightly stressing ‘the drastic fall in transaction costs’ brought about by the unitary political organization and the standardization of weights and measures and currency,⁹⁴ nonetheless accepts that they were high ‘given the factors of uncertainty in exchanges’.⁹⁵ Peter Bang, while agreeing on the effects of monetary and judicial unity, thinks Lo Cascio is too optimistic. He points out all the possible fragmentation forces that remained and is of the view that ‘transaction costs frequently made it unprofitable or very risky to seek to realize the gains of trade. In general, this situation seems characteristic of markets in the Roman Empire.’⁹⁶

THE INFLUENCE OF TRANSACTION COSTS: GROWING INEQUALITY

Here some qualification is required; not all markets were the same. Lo Cascio’s remark pertains to institutional transaction costs. In this matter, the Roman Empire does appear to have been a privileged phase separating the preceding periods, including the Hellenistic world, from the Middle Ages, when fragmentation dominated in all respects. Monetary unity, low customs duties, and even the community created by the *utraque lingua* were features that have hardly ever been reproduced, even in the world of today. These were undoubtedly factors that facilitated trade. What is at issue is whether they were influential enough to be decisive.

If we restrict ourselves to the example of France, the Revolution swept away the conditions that had obtained under the Ancien Régime and brought about a situation that was close to that of the Roman Empire: abolition of internal customs duties (even though city tolls remained) and unification of weights and measures with the decimal system. There was a single currency. It can be said, too, that, in the matter of transport, roads had been improved even during the eighteenth century, and again under Napoleon, and canals were dug during the Restoration period. All this promoted the development of trade.

⁹³ See the findings and comment of Picon (2002).

⁹⁴ Lo Cascio (1994: 95–6; 2009: 275 (2003b)).

⁹⁵ Lo Cascio (2006: 221–2; 2007a: 7–8).

⁹⁶ Bang (2007: 24). For a broad discussion, see Bang (2008: 179–95).

Even so, it took until a little after the middle of the nineteenth century, when the southern wine-producing towns had been linked to Paris by railways, for the wines of Languedoc to start becoming available in the capital,⁹⁷ thanks to a four-fifths reduction in transport costs. Until then, supplies of common wine came to Paris from the Orleans region, from lower Burgundy, and from extensive vineyards that had spread over the region round the capital and gave abundant harvests because the vines were fertilized by the city's night soil. Production from this local source, which had reached one million hectolitres not long before the Revolution, exceeded 1.3 million by 1852. By about 1870, this had fallen by two-thirds; and it was maintained for a time only because phylloxera was very slow to arrive there. The main disruptive element in this market was transport costs and not transaction costs. As Lachiver says: 'As a transport revolution, the coming of the railways cannot be over-estimated.'

It may not be coincidental that the transaction-costs theory emerged after the other transport revolution,⁹⁸ the one caused by the advent of containers in the late 1960s. They drastically reduced the costs entailed in off-loading and reloading and eventually brought down transport costs to a level that was almost economically negligible. For a mode of transport combining sea and land, these costs had been masking those deriving from institutions and the drawing-up of contracts.

Other aspects of transaction costs, the cost of information, which is the one most often cited, as well as the cost of drawing up new contracts, reveal something about the inequality of situations in which people found themselves under the Roman Empire. Wherever the *cursus publicus* existed, there was fluent circulation of information, even if it was private. This was the case in particular with relations between the armies and Rome.⁹⁹ The food-supply organization (*annona*), instead of trying to optimize prices by having frequent recourse to new bids, preferred, for transport or commodities that it bought on the open market, to rely on stable contracts with groups of familiar shipowners or traders. In the Roman Empire, markets were not open to any random person. They were a space where patronage, connections, and friendship in the Latin sense of the word (*amicitia*) were in their element.

Yet examination of the situations of other pre-industrial eras leads to the conclusion that transport costs were a function of techniques that, though they evolved, were nonetheless radically opposed to those that came in with the Industrial Revolution. Roman draught animals were anything but ineffective; and the tonnage and performance of large ships were equivalent to those built

⁹⁷ Even after the great frosts of 1709, government action was required for wines from Languedoc to be transported to Paris. The route followed is an interesting one: the Entre-deux-Mers canal to the River Garonne; thence to Bordeaux; by sea to Nantes, then up the Loire to the Orleans canal. Lachiver (1988: 410, 605–7).

⁹⁸ Williamson (1985).

⁹⁹ See Ch. 16.

between the fourteenth and eighteenth centuries.¹⁰⁰ Constant efforts were made to rationalize the containers, as can be seen in the wrecks of ships carrying *dolia*, more and more of which are being discovered,¹⁰¹ and in the use of casks that extended almost everywhere in the Roman west between the end of the first century BC and the fourth century AD. However, none of this invalidates the assumption that, generally speaking, there is a great gulf between transport costs at any of the various periods before the Industrial Revolution and those that came after it.¹⁰² As for transaction costs, it should be remembered that, well before then, the invention of the printing press had revolutionized the spread of information. By 1585, price rates for goods on the Amsterdam stock exchange were being printed and broadcast to the world at large.¹⁰³ This made for integration of markets and lowering of transaction costs in ways not available to the Romans.

PARADOXES

The higher the transport and transaction costs, the lower will be a trader's share of the profits at the point of delivery, if he leaves unchanged his rate of surplus value on the goods and passes on only the costs. He has little motivation to move into long-distance markets and face the risks and uncertainties that would involve, except with merchandise of great value.¹⁰⁴ Despite that, the Roman Empire offers examples, which are without or almost without later equivalent, of heavy goods for mass consumption being regularly transported across considerable distances. Rome's grain supply was supported by the greatest merchant navy organization ever known, at least until the discovery of America. The dispatch of oil and salted fish from Baetica to Germania over more than three centuries, and for more than two centuries to Britannia, both to the southern cities and to the forts along Hadrian's Wall and the Antonine Wall,¹⁰⁵ is a great achievement. What made this possible requires some explanation.

The fact that many amphorae and casks that once contained wine from central and southern Gaul have turned up in the forts and cities of these provinces also requires explanation, especially when seen in the light of the above-mentioned inability to deliver wines from Languedoc to Paris in the eighteenth century and the first half of the nineteenth before the construction of the railways, a period when these wines were being exported to Italy, in

¹⁰⁰ Pomey (1997: 101); Raepsaet (2002). ¹⁰¹ Marlier (2008); Heslin (2011).

¹⁰² See the closely argued conclusions of Erdkamp (2005), 198–204, and Bang (2008), 133–9.

¹⁰³ Jeannin (1987²), 72–3; Bang (2008), 198.

¹⁰⁴ See also Bang (2008), 136–40.

¹⁰⁵ Germania: see Ch. 16. Britannia: Carreras Monfort and Funari (1998), who have counted about 1,800 stamps on Dressel 20s in England and Scotland.

particular to the Leghorn area. Another point of interest is that one of the commonest wines in Rome came from Crete.¹⁰⁶ The unexampled vanquishing of distance by such trading cannot be explained away by Adam Smith's 'invisible hand'. In such trade lies the whole specificity of Roman commerce; and that is what must be examined.¹⁰⁷

¹⁰⁶ See Ch. 17.

¹⁰⁷ Which is the very reason I stress things that do not fall within the sphere of interest of Horden and Purcell (2000: 365–6). My view is shared by Shaw (2001: 431, 447) and Bang (2008: 142–3).

The Role of the State

LIMITS TO STATE PARTICIPATION

It would be a simple matter if we could see the state as the organizing authority behind all the great, long-distance trading in daily consumer goods. Monte Testaccio in Rome and the amphorae for wine, oil, olives, salted fish, and fish sauces present at the military sites could all be explained by the functioning of the different branches of the food-supply system (*annona*). However these goods had been come by (tithes, requisitioning, or by contract), and even if in some cases they were sold and not just distributed, their transport costs would not necessarily be reflected in the sale price. The extent of the distribution would be limited only by the state of the imperial coffers and the possibilities of exploiting the provinces. And it would be possible to speak plainly about redistribution and a state-run economy.

All the evidence, however, points to a much more restricted level of state participation. The emperors were responsible for the monthly delivery to Rome of 750,000 *modii* of grain to be doled out to the 150,000 people who qualified for free hand-outs (63,000 tons per annum); they felt in general responsible for supplying grain to the capital, in the hope of obviating, as much as possible, the risks of food shortages. In the second century they extended this responsibility to oil and much later to wine and pork.¹ Any other sporadic actions were responses to particular crises. Pliny the Elder says that, during the reign of Tiberius, there was a very lean year for papyrus. In Rome 'a shortage of paper led to the appointment from the senate of umpires to supervise its distribution, as otherwise life was completely upset' (trans. H. Rackham).² This was one of the rare instances of government action in an area of distribution unrelated to food shortages and a few fixed prices, such as that of minium from *Sisapo*. It came in response to a crisis that threatened to lead to chaos, though in this case it was probably also influenced by the fact

¹ See Vera (2005a: 247–8) for a review of current thinking on the question and a new chronology for distributions of low-priced wine.

² Pliny, XIII. 89.

that the primary users of papyrus were the bureaucrats in the imperial administration.

Apart from Rome itself, the army's service corps was the second area in which the state played a role. To discover what was issued to soldiers by the authorities, and more generally to understand the ways in which the armies stationed along the *limes* were kept supplied with essentials, has been a long-standing focus of research and source of hypotheses. None of this scholarly activity, however, has produced simple answers; and the discovery of the *Vindolanda* tablets has complicated rather than clarified the matter.³ Here I deal with only one aspect of the question.

SUPPLYING THE ARMY

When we speak of 'military supply', we must not indiscriminately lump together everything that was delivered for use by the troops and their officers; a distinction must be made between what was issued by the military authorities and what was bought individually via private dealing. The army was surrounded by hordes of traders, in particular the related pair of *lixae et mercatores* (or *negotiatores*). The first of these words is often translated as 'sutler', but this is definitely too reductive.⁴ The *lixae* can sometimes appear to have been soldiers' servants, but more often they were the poor and lowly who were attracted to the military by all the opportunities it gave for scrounging small profits; they could provide services, sell prepared meals, bread, or whatever else they had managed to acquire. In the vicinity of the army, they could engage in all sorts of small deals. Each time it was decided to tighten up discipline, they were banned from contact with the troops. As for the *mercatores*, they were in a higher category; it could be asked whether those who lived in close proximity to the camps were under contract to the official suppliers or brought in things for private sale to soldiers. The answer is that both activities were inseparable. Take the example of the revolt of the Batavi, who fell upon the *lixae et mercatores* 'scattered about the country as if it were a time of peace' and massacred them:⁵ the *mercatores* did not restrict themselves to particular tasks; like the *lixae*, they were constantly on the look-out for any opportunity for gain. Some of them went so far as to sever all links with the *patria*, abandoned the Empire and their posts, and went over to the court of the German king Marobodus, where they are to be seen in AD 19 engaged

³ Recent surveys of the situation are to be found in three collections: Alföldy, Dobson, and Eck (2000); Erdkamp (2002); De Blois and Lo Cascio (2007). For a synthesis, see Rathbone (2007).

⁴ Roth (1999: 93–101); Cuvigny (2003: 365–9).

⁵ Tacitus, *Hist.* IV. 15, 3.

in trading.⁶ These were the same men who had been in the habit of selling wine to the soldiers or bartering it for booty, which was the rule under the Republic.⁷ Soldiers were, of course, glad of any such improvement to their daily fare. The preamble to Diocletian's edict suggests that excessive prices were enough to ruin them. There were markets at the camp gates;⁸ and, when military discipline broke down, the traders, along with the *lixae*, the prostitutes, and the soothsayers, would have to be expelled.⁹

So we can readily agree with D. J. Breeze and Lothar Wierschowski¹⁰ that a clear distinction must be made between the supplies that the army itself was responsible for delivering to the troops and anything extra that the soldiers could get for themselves, either from traders or in the taverns of the *canabae* and *vici*, which periodically were also supplied by these same traders. Telling these different supplies apart, though, is more difficult.

Three consistent sources—passages from Polybius and Tacitus,¹¹ and then the papyri *PGenLat* 1 and 4, dating from AD 81 and 84¹²—indicate that soldiers' pay was docked in return for the grain, uniforms, and at times weapons issued to them.¹³ The sums detailed in the Geneva papyri never vary, from which it is concluded that the amounts docked were lump sums, set without reference to market prices.¹⁴ For later periods, the long series of *ostraka* found at Pselkis in southern Egypt, dating from the third quarter of the second century or the early third century, offer different evidence. It consists of receipts from soldiers for sums paid to them by the *cibariator* based on the price of wine they could have received but did without. It may be assumed that, at that time, wine was supplied to soldiers by the army and that they could take money in lieu of their ration. The prices vary for quantities that are the same, which means the wine was sold at prices that were linked to market prices, unlike the docking of the fixed sums just mentioned. Later papyri would appear to prove that oil eventually came to be dealt with in the same way.¹⁵

⁶ Tacitus, *Ann.* II. 62, 3.

⁷ Polybius, XIV. 7, 2; Sallust, *Jug.* XLIV. 5.

⁸ Whittaker (2004: 105).

⁹ See, for example, Scipio arriving at the siege of Numantia in 134 BC: 'Ελθὼν δέ ἐμπόρους τε πάντας ἐξήλαυσε καὶ ἐταίρους καὶ μάντεις καὶ θύτας (Appian, *Hisp.* LXXXV. 367).

¹⁰ Breeze (2000: 63–4); Wierschowski (2002: 269–70). Lo Cascio's reservations (2009: 289–90 (2007b: 198–9)) require more detailed consideration. I repeat here in part what I said about wine (Tchernia 1986: 11–19).

¹¹ Polybius, VI. 39, 12–14; Tacitus, *Ann.* I. 17.

¹² Fink (1971: nos 68, 69).

¹³ Polybius speaks of *πυρός* and *σίτος*. Tacitus says nothing about food. And the Geneva papyri say *in victum*; they add a sum for fodder and uniforms, and make regular mentions of expenditure on footwear and gaiters, plus infrequent mentions of expenditure on clothes. The passage in Tacitus adds tents.

¹⁴ Here I leave aside the problem of methods of supply.

¹⁵ On soldiers' daily fare, see, in addition to the references in n. 3, Roth (1999: 14–59) (though I disagree with him on a few matters).

In the first century AD, grain was the only foodstuff explicitly included in the category of food supplies for which pay was deducted. There are, however, indications in Polybius and the *vita Hadriani* from the SHA that suggest that what was eaten with bread, the *obsonium* or *pulmentarium*—that is, pork, fat, and cheese—was also normally included.¹⁶ This raises the question of the delivery of the wine, oil, olives, *garum*, and salted fish contained in the amphorae found in such abundance in all the military forts, especially those on the Germanic *limes*, on the Danube, and in Britannia. Though it has never been suggested that olives or fish products should be seen as army issue, there are differing schools of thought on wine and oil. Erdkamp includes olive oil, salt, vinegar, and perhaps wine among standard supplies to the troops.¹⁷ José Remesal and his followers have long held the view that the oil from Baetica (they pay little attention to the oil from Istria in the forts on the Danube, from Tripolitania at Bu Njem, and from Africa in Morocco¹⁸) came as an impost in kind among the basic supplies. My own view continues to be that, until some unknown time in the second century, possibly in the earlier years, *posca* (water mixed with vinegar) was the soldiers' drink.¹⁹ As for the oil from Baetica, Remesal's arguments have been discussed and refuted particularly by Lothar Wierschowski and Ulrike Ehmgig,²⁰ and nowadays his conclusions are usually rejected.²¹

This does not rule out the possibility that some amounts of oil and wine were ordered by the different military commands. Oil was required for lighting the *praetorium*. There is a text by Livy, drawn on by Erdkamp, that should not be overlooked: in 190 BC, during the war against Antiochus, cargoes of grain but also of wine were expected from Italy; as the latter were delayed, the *praetor* managed to get hold of amphorae that the enemy had stored.²² It was essential to give wine to the sick and the labourers, such as oarsmen.²³

¹⁶ Polybius, II. 15; SHA, *Hadr.* 10, 2.

¹⁷ Erdkamp (1998: 34).

¹⁸ Rebuffat (2000: 227).

¹⁹ Cato (Plutarch, *Cato ma.*, I. 7) and Hadrian (SHA 10, 2) drank it when they wished to show they shared the same fare as the troops. Cf. Tchernia (1986: 13–14). At *Vindolanda*, on a tablet from period 3, the turn of the first and second centuries, a decurion writes to the prefect of the camp, Flavius Cerialis, that his soldiers have no beer, asking him to send some (*cervesiam commilitones non habunt, quam rogo iubeas mitti*): Bowman and Thomas (1996: 324). It is obvious that beer was part of their everyday fare; but it was a local product and it should not be deduced that wine had the same status.

²⁰ Ehmgig (2003: 104–10). See Ch. 16.

²¹ Pearce (2002: 940); Harris (2003: 297); Eck (2007: 74, 78, n. 68); Lo Cascio (2007c: 638).

²² Livy, XXXVII. 27, 1–3; Erdkamp (1998: 34, n. 30).

²³ On campaign, Cato drank *posca* but also a little wine when he felt weak (Plutarch, *Cato ma.*, I. 7). At such moments, he made do with the same wine as his oarsmen (Frontinus, *Strategemata*, 4, 3, 1). See the second-century inscription on a cask from *Aquincum*: *immune in r(ationem) val(etudinarii) leg(ionis) II adi(utricis)* (Marlière 2002: 113–14). It should be remembered that to keep a camp of two legions supplied with its minimum wine ration (one *sextarius*, approximately 1 pint or 0.546 litres per man per day) it was necessary that there be a

But, over and above that, many goods, presumably the greater part of those whose delivery is attested by the amphorae, were bought from traders by the soldiers and civilians around them. It is no longer accepted that the troops were issued with terracotta ware. D. J. Breeze, who has studied this matter more than anyone else, and who in 1977 was still entertaining various hypotheses, had concluded by 2000 that there was no evidence that the army issued pottery to the soldiers, except in cases where it had set up workshops of its own.²⁴ Allard Mees, after an exceptionally exhaustive study of the distribution of decorated terra sigillata dishes from La Graufesenque, showed there were two main focuses: one regional, centred on Aquitania, the other the army: 'The legions acted like a magnet on pottery from southern Gaul.' He does not accept, however, that the army supply corps played a role in this: such earthenware dishes can also be found at civilian sites; there was no link between military forts and particular potters who might have benefited from contracts. After all, it would be surprising if the army had issued the troops with pots with relief decoration rather than just with plain ware. The abundance of decorated terra sigillata pottery in camps of legionaries is explained by the simple fact that there were people there who bought it, even though it cost more than plain ware and had been transported over a long distance.²⁵

Most of the soldiers, at least in the first century AD, came from Italy or from the senatorial provinces near the Mediterranean. If they were posted to the Rhine or the Danube, they did not completely forgo items that might still be available and that they were used to, especially wine. Even Roman traders established at Arikamedu on the Bay of Bengal had managed to bring amphorae across the Indian Ocean and the Deccan plateau, a very few of olive oil and a slightly greater number of wine.²⁶ The morale of the troops stationed in the northern provinces of the Empire depended on the possibility of supplementing daily rations with Mediterranean products and spending their time off duty drinking wine *in popina*.

Could they afford to pay for products brought in from so far away along such complex routes? When a base-grade legionary had paid all the different sums docked from his pay, contributed to expenditure on the camp's religious observances, and put by the compulsory savings, there was not much left. With what remained, however, he was privileged rather than a pauper. The grievances of the troops who took part in the Pannonian revolt in AD 14 should

daily delivery of 328 twenty-litre amphorae or nine large casks of approximately 750-litre capacity.

²⁴ Breeze (1977; 2000: 63). Cf. Desbat (1996: 239).

²⁵ Mees (2007).

²⁶ Will, in Begley et al. (1996: 321–41, 345); and Begley et al. (2004: 325–404).

not be taken entirely at face value.²⁷ Payment of a regular *stipendium*, over and above basic needs, was exceptional in Antiquity.²⁸ And soldiers had the occasional enjoyment of extra income, including the *donativa*, which fell once or twice during each reign and which they readily spent *in luxum et epulas*, in gluttony and riotous living.²⁹

It should be particularly noted that the range of pay rates was extremely wide. The most basic promotion entailed a 50 per cent increase in pay (the *sesquuplicarii*) or 100 per cent (the *duplicarii*). Speidel estimates that there must have been about 480 of these *principales* per legion.³⁰ Centurions, who earned at least fifteen times more than legionaries, were certainly not short of money. For their part, staff officers, legates and tribunes, and the *primipili*, could afford whatever they fancied, especially since anything they ordered was, as we shall see, exempt from tax.³¹ Of the miscellaneous items listed on the *Vindolanda* tablets as having been bought or sold, most seem to have been related to supplies for the *praetorium*.³² Dishes of terra sigillata, in those camps where their distribution has been studied, are found mainly adjacent to the *praetoria* and luxury quarters;³³ as we have seen, the army was an important market for decorated ware.

The army was not a single socially homogeneous unit. The proportion of purchases of Mediterranean products made by its privileged members needs to be re-evaluated. Traders were definitely attracted by the presence of a minority whose purchasing power was relatively or very high. However, as we shall see, the possibility of combining supplies ordered and issued by the army with those that the traders delivered for open sale reduced both transaction and transport costs, increased the numbers of purchasers, and gave a substantial fillip to commercial endeavours.

²⁷ Tacitus, *Ann.* I. 17. Wierschowski (1984: 2–64, 112–25); Speidel (2000: 85–94); Carrié (2002: 156–64).

²⁸ In his conclusion to a thorough and sensitive study, Rathbone (2007: 176) goes farther than this: 'Roman soldiers of the Principate belonged to the largest salaried labour force known before the Industrial Revolution.'

²⁹ Tacitus, *Hist.* IV, 36, 2. See Wierschowski (1984: 115–26).

³⁰ Speidel (2000: 70).

³¹ On the things they ordered, see Ehlig (1996).

³² Bowman and Thomas (1994: 119, 153, 159, 162–3); Pearce (2002); Whittaker (2004: 90, 106 (2002)). The tablets, found, at levels earlier than Hadrian's Wall, in a fort that contained one or two cohorts of auxiliaries, offer evidence of how various the intermediaries were and how diverse their interests were, with lists that include eatables, iron, nails for footwear, clothes, and napkins.

³³ At Bearsden, on the Antonine Wall, Breeze (1977). He concludes (also after examination of small forts) that use of such terra sigillata dishes is rarely associated with ranks below that of decurion. At Haltern, Galsterer (1983: 18–20, 33–4) is less constrained by methodological reservations than Schnurbein (1982: 134).

SIDE EFFECTS OF FOOD-SUPPLY POLICY

Grain Was a Giffen Good

Bread, or cereals more generally, constituted the basic indispensable foodstuff. Under normal circumstances, there were no acceptable substitutes for them. The elasticity of demand was minimal. If the price rose, people went sparingly with other expenditure, such as that on *pulmentarium*, in other words what was eaten with bread; or they drank less wine. So their intake of calories, from sources other than grain, was reduced; and they were constrained to eat more of it. Grain was a Giffen good—that is to say, one for which demand paradoxically rises when its price rises.³⁴

The consequence of this is that demand for other foodstuffs largely depends on the price of cereals. Fluctuations in the price of wheat cause greater fluctuations in prices for wine, oil, fish, and fruit. By ensuring that the troops got their ration of grain at a price independent of the market and by regularly doling it out free to 150,000 inhabitants of Rome, the state contributed in a major way to the regularization of the market for other foodstuffs. It afforded security to producers and traders; and it had a stimulus effect on exports to the populations so favoured.

On the Usefulness of the Misuse of Public Property

Dick Whittaker has drawn attention to a revealing text in the *Digest*: Paulus says that Hadrian had to write to provincial governors to remind them that

when anyone dispatches an individual for the purpose of making purchases for the benefit of those who command armies or govern provinces, or for the benefit of their agents, he shall sign an order with his own hand, and send the same to the [tax] farmer of the revenue, so that if he should transfer anything more than he had been instructed this excess should be subject to tax.

(trans. S. P. Scott, adapted)³⁵

Though the emperor was disturbed that goods being traded for less official persons were avoiding payment of duty, he had nothing against the fact that such items were transported by the same carriers. They must have benefited from either a complete exemption from carrying charges or a very low rate. Military men were not forbidden to conduct private business and engage in trade if the opportunity arose, as long as this did not impinge on the time they

³⁴ In addition to standard works on economics, see Grenier (1996: 307–15).

³⁵ Whittaker (1994: 111–12 (1989)), 63; *Dig.* XXXIX. 4, 4, 1. In the following pages, I revisit and expand some ideas touched on in 2002; see Ch. 16, pp. 259–61.

spent on their official duties.³⁶ There are not many cases of this; and the only serving man who states that he is also a *negotiator* was a sailor with the fleet stationed near Cologne.³⁷ This does not fall to mere chance: the papyri leave no doubt that military men who engaged in commercial undertakings were taking up space for their private purposes on ships of the battle fleet.³⁸ Whittaker has identified in the *Vindolanda* tablets soldiers who were parties to contracts for supplies of local provenance, his conclusion being that, 'if even *conductores* could be soldiers, the distinction between soldier and civilian was hopelessly obscure'.³⁹

In fact, from other examples it has for some time been apparent that the dichotomies we make nowadays between public and private and civil and military were not as clear-cut in the Roman mind; nor were roles as self-contained.⁴⁰ If a trader took advantage of a state contract to convey additional goods that he would then sell in the market, or if he contracted with a carrier to fill up empty space among the official cargo cheaply with makeweights of his own merchandise, no objection was raised.⁴¹ Nor would there have been much objection if a trader was authorized by a centurion to load a few hundred dishes or several amphorae onto a vessel of the military fleet, given that this was a world in which soldiers, according to the Pannonian mutineers in AD 14, could bribe their way out of harsh treatment by a centurion or buy exemptions from fatigue duty.⁴² It is clear that string-pulling, influence-peddling, and corruption were rife, which bothered no one.⁴³ Indeed, the only outcome of all this was that, once a group of traders had ingratiated themselves with the army, with the *magistri* of the ships carrying annony supplies, or with anyone else, it was very difficult for any newcomer to elbow in. The markets of the Roman Empire were not a free-for-all. This contributed to the stability noted in Chapter 2 (see p. 70).

I have applied this interpretation to the supply of wine from Crete to Rome, which must have been fitted into the gaps among the cargoes of the grain ships

³⁶ Tacitus, *Ann.* XIII. 51. Wierschowski (1982: 31–2).

³⁷ [M]illes classis Germanic(a)e [Do]mitianae p(iae) f(idelis) negotiator cervesarius artis effectur(a)e, AE (1928: 183). The meaning of *artis effecturae* remains obscure: see Schlippschuh (1974: 36–7) and Wierschowski (1982: 36–40), who also studies the cases of the *centurio negotiator* of the XVth legion, AE (1978: 635), and the κυβερνήτης of a centurion in Egypt.

³⁸ There has been profitable discussion of this whole matter by Wierschowski (1982: 31–2).

³⁹ Whittaker (2004: 96 (2002: 216)).

⁴⁰ Cf. Sirks (2003: 270): 'In referring to the public and private sectors in the Roman world, one must bear in mind that the distinction between them was not as clear as it is in modern Europe.' In Germania, civilians must have lived inside the military fort at Haltern; and the civic establishment of Waldgirmes was part of a military strategy. See Becker (2002: 463); Willems and van Enckevort (2009: 19).

⁴¹ Jacobsen (1995) calls these practices *Nebenhandel* and *Folgehandel*. See p. 114.

⁴² Tacitus, *Ann.* 1, 17.

⁴³ See comments by Paul Veyne (1981), in another context.

from Alexandria that called at the island.⁴⁴ One of the ships mentioned on P. Bingen 77 reached Alexandria from Side, laden with thirty-two trunks of pine trees for the emperor and 216 half amphorae of oil from Aspendos, close to Side, for Numerius, who was also known as Kallistratos.⁴⁵ The oil probably travelled at an advantageous freight rate. So here we have a series of cases, from widely separated places and showing a great variety of circumstances, in which traders took the opportunity of using official transport to carry their goods at prices below the real cost. Eventually, in 395, Arcadius and Honorius voiced objections to this practice, pointing out that it was forbidden to add private goods to official cargoes or oblige grain-carriers to take on extra freight.⁴⁶ This shows, as Evelyn Höbenreich says,⁴⁷ that such a way of doing things was taken for granted.

Whether one sees this as collusion between the public and private spheres, or as mere collaboration, it was a system that definitely facilitated the blazing of new commercial trails parallel to the ones used for the annony traffic or for goods being sent to the imperial court. Mattingly and Wickham long ago, and simultaneously, argued that oil and ceramics from Africa Proconsularis had been carried on board grain ships.⁴⁸ And it is a fact that the oldest amphorae from Tunisia are practically absent from wrecks before the end of the second century AD (we now know they began to appear in the late first century), which would be understandable if they were just added in small numbers to shipments of grain and probably also of marble.⁴⁹ This idea has recently been taken up and expanded by David Stone, who applies it to amphorae for carrying salted fish products, which, in the second half of the second century and especially in the third, could also have been shipped with oil amphorae for the *annona*. Stone's general conclusions coincide with Whittaker's and my own.⁵⁰

⁴⁴ See Ch. 17, 'The Low Price of Cretan Wine in Rome'.

⁴⁵ Heilporn (2000).

⁴⁶ C. Th. XIII. 8, 1. Tarruntenius Paternus had already pointed out in the first century AD that a legate should not send soldiers to take part in a private hunting or fishing expedition (*Dig.* XLIX. 16, 12, 1). Wierschowski (1982: 31–2) makes the point that in fact officers often had soldiers perform private commissions for them.

⁴⁷ Höbenreich (1997: 90, n. 151).

⁴⁸ Mattingly (1988: 53–4); Wickham (1988: 191). On oil from Baetica and metal, see pp. 121–3 and 262.

⁴⁹ Bonifay and Tchernia (2012).

⁵⁰ Stone (2009: 143–5). See, in particular, the hypothetical example he gives for the itinerary of the African IID amphora (containing salted fish or fish sauce) bearing the stamp *AN.LEP* found in the villa at Montmaurin (Haute-Garonne): carried from *Leptiminus* to Ostia on a ship laden mainly with state-owned oil; at Ostia, sold to another trader who dispatched it to Narbonne (I would add, as return cargo from a delivery of wine); in Narbonne, bought by an agent of the villa owner, who then took responsibility for its carriage the rest of the way.

Infrastructure and Organization: The Example of Lyons

None of these little transport arrangements could have taken place without the prior construction of roads and harbours, the setting-up of facilities on large rivers, or the digging of canals, all of which was done at public expense.⁵¹ The transaction costs mentioned in Chapter 3 (see p. 94) were also lower and more stable than elsewhere along these much-frequented lines of communication, with their easy circulation of information and well-known markets. There is no point in rehearsing such self-evident things. However, the organization of a military supply system with its staging posts does deserve closer examination, through its most striking example, the links between the Mediterranean and the Rhine.

When Augustus conceived the plan to invade Germania and thus to augment the Empire by the addition of provinces that would rival those of the Three Gauls,⁵² he established his main residence in Lyons and spent nearly three and a half years in Gaul, from early 16 BC until the month of July 13 BC. For his part, Agrippa had just spent, for the second time, two years in Gaul, from 19 to 17 BC. The effect of the emperor's stay on economic relations between a province and Rome (for instance, his stay in Tarraconensis between 27 and 25 BC) was certainly significant. The emperor had to stay in constant touch with the capital. He and his retinue never stinted themselves, and money was plentiful. This was a great opportunity for traders; and, in addition, they had ready access to information about needs and requirements that would flow from the imperial projects. But there is evidence to suggest that the state played a more active part.

The logistics of the push towards the Elbe were carefully planned and prepared.⁵³ Many troops were to be stationed on the Rhine, giving Drusus five or six legions.⁵⁴ All material support would have to be provided. Lyons was chosen as the base camp, at the same time as (possibly even before) the forts at Nijmegen and Neuss were established as departure points, probably in 16 BC.⁵⁵ The most spectacular and audacious administrative measure was the transfer to Lyons, in 15 BC, of the mint that produced all Roman gold and silver coinage, clearly with the intention of bringing it closer to where it would have most use, for the soldiers' pay and other expenditure on the army. A military cohort was assigned to it. Lyons retained this monopoly

⁵¹ For harbours at Rome, see Ch. 11. For the Rhône, see p. 260.

⁵² For a bibliography of discussion on this subject, see Wierschowski (2002: 266 and n. 8).

⁵³ On the quality of Roman military logistics, see Roth (1999: 219–22).

⁵⁴ Wierschowski (2002).

⁵⁵ The dates change as excavation proceeds: Nijmegen may have been established as early as 19 BC; Willems and van Enckevort (2009).

until AD 64.⁵⁶ Strabo speaks of this as one of the most salient features in the portrait of the city:

As such, Lugdunum itself, then (a city founded at the foot of a hill at the confluence of the River Arar and the Rhodanus), is occupied by the Romans. And it is the most populous of all the cities of Celtica except Narbonne; for in fact the Roman governors use it as an emporium and coin their money there, both the silver and the gold. (trans. H. L. Jones, adapted)⁵⁷

In a few words, Strabo records a double decision by the Roman ‘governors’: to use Lyons as an *emporium* and establish in the city the Empire’s mint. The word *emporium* has a clear commercial and civil meaning;⁵⁸ it cannot be reduced to mere storehouses and military supplies, which also existed.⁵⁹ A place usually takes on the character of an *emporium* because of topography and the current state of the economy. And it could appear to have been the position of Lyons at the confluence of the Rhône and the Saône that made it the natural choice. Things, however, may not be so simple: ‘Despite the grandiose appearance of the site, it was not predestined to pre-eminence by its geography... These unhealthy swamplands enclosed between steep crags benefited from a political context much influenced by the course of History.’⁶⁰ This observation by Poux concerns the founding of *Lugdunum* by Plancus; but it can also be applied to the development of commerce contemporaneous with the establishment of the mint, which Strabo presents as an aspect of policy.⁶¹

About forty years ago, a workshop that produced the type of pottery known as *sigillata* was discovered in Lyons; there are no differences between its products and those made in Italy. The technique of firing in kilns fitted with clay pipes is the same; the potters’ signatures are those found on the pots made in Arezzo. The only way to tell them apart is by analysis of the clay. There can be no doubt that we are dealing with a sub-branch of the Italian workshop. The analyses prove in addition that another sub-branch was

⁵⁶ Amandry and Schmitt (2007).

⁵⁷ Strabo, IV, 3, 2: *Αὐτὸ μὲν δὴ τὸ Λούγδουνον, ἐκτισμένον ὑπὸ λόφῳ κατὰ τὴν συμβολὴν τοῦ τε Ἄραρος τοῦ ποταμοῦ καὶ Ῥοδανοῦ, κατέχουσι Ῥωμαῖοι. εὐανδρεῖ δὲ μάλιστα τῶν ἄλλων πλὴν Νάρβωνος· καὶ γὰρ ἐμπορίῳ χρώνται, καὶ τὸ νόμισμα χαράττουσιν ἐνταῦθα τό τε ἀργυροῦν καὶ τὸ χρυσοῦν οἱ τῶν Ῥωμαίων ἡγεμόνες.*

⁵⁸ Étienne (1993).

⁵⁹ There are traces in Lyons of a workshop producing arrowheads of a type found in the camps from the Augustan period; Desbat and Maza (2005: 81); Le Mer and Chomer (2007: 544–5). See Long, Rico, and Domergue (2002) and Domergue et al. (2003) on the large quantities of iron transported for military use and wrecked ships carrying iron to the Rhône.

⁶⁰ Poux (2005: 25); coinciding with Drinkwater’s much earlier remarks (1975).

⁶¹ I rely here on Goudineau’s version (1989) of Strabo, which is almost identically reproduced by Thollard (2009: 41). A different interpretation is possible: that the subject of *χρώνται* is οἱ Ῥωμαῖοι in the preceding sentence. This would have the effect of making the role played by the governors in the establishment of the *emporium* less clear-cut; but the link between the idea of *emporium* and the setting-up of the mint remains.

established at the same time in another part of Lyons. It belonged to Ateius, a major producer in Arezzo and Pisa. The opening of these workshops has been dated by archaeologists to 15 BC. Analysis of potsherds in terra sigillata retrieved from the Augustan camp at Haltern (7 BC to AD 9) shows that about half of them were made in Lyons. The author of the analysis, von Schnurbein, who took the view that ceramic dishes were part and parcel of the supplies provided by the military organization, drew attention to the closeness of the dates when the mint and the potteries were founded, as well as to the time lag between the establishment of the potteries and distribution of their products: coins and terra sigillata pottery were still rare in the fort at Oberaden (11–8/7 BC), but became very frequent afterwards. This struck von Schnurbein as astounding, much more than a coincidence, and he saw it as proof that the army had played a role in the origin and transporting of the Lyons pottery. He stated more precisely that the state must have ‘sponsored’ the establishment of the two branches.⁶² Ten years later, Wells revisited this matter, much along the lines laid down by von Schnurbein but asking the question more pointedly: ‘Did the Roman authorities commission the setting up of a pottery manufacturing centre in proximity to the mint, or was it private enterprise? Did pottery and coins use the same supply routes, share the same riverboats or the same wagons?’⁶³ The importance of civilian outlets in the market for pottery made in Lyons appears nowadays to have been not nearly as slight as it seemed at the time of von Schnurbein’s monograph. In particular, it can be found in a great many sites in the far west of Gaul. Well before the opening of the Italian branch workshops, potters had started operating in Lyons; they had links to the Etrurian sigillata workshops, or to those producing Aco beakers in the Po region. So the Lyons potters did not strictly depend on the army.

On the other hand, there has been a new relevance in the questions raised by von Schnurbein and Wells since it was noted that, also from 15 BC, there were amphorae being made in Lyons in imitation of forms from Italy (Falernian amphorae), Greece (Coan amphorae), and Spain (fish sauce amphorae).⁶⁴ I have elsewhere argued, as have other scholars, for the idea that by that time Lyons had become a terminal for *dolia* ships,⁶⁵ which make their appearance at exactly that moment: the wine shipped in *dolia* (fixed

⁶² Schnurbein (1982: 127).

⁶³ Wells (1992: 200).

⁶⁴ Dangréaux et al. (1992). This finding was first announced by Desbat (1987).

⁶⁵ Tchernia (1997). See also Audin (1968); Desbat (1991); Hesnard (1997); Dangréaux (2002); Le Mer and Chomer (2007: 438); Marlier (2008), 164–9; Heslin (2011: 164). For my interpretation of the types of amphorae made in Lyons, I have relied on Morel’s article (1989) on a workshop at Cales in the neighbourhood of the *Ager Falernus*, where the two types imitated at Lyons were produced; the Dressel 2–4 ‘Falernian’ type was for holding the renowned local wine, and the ‘Cos’ type was for salted wines, like those made on the island of the same name, the recipe for which can be found in Cato.

permanent containers) was decanted on arrival, some of it into amphorae (this was done with wines of some renown, which were normally contained in amphorae whose shape indicated the origin or type of the wine), and some of it, the ordinary wines, into casks, which are known to have been made in Lyons.⁶⁶ That casks were the overwhelming majority of containers is demonstrated by the thirty-seven of them found at Oberaden, in capacities ranging from 350 litres to 1,300.⁶⁷ This bespeaks a revolution in ways of transporting wine and probably also ways of transporting fish sauces.⁶⁸ It was already known that in Lyons and even in more northern sites there were wine amphorae imported from Italy, Hispania Tarraconensis, and the eastern Mediterranean. But now they are paralleled by a system in which Lyons was a standard clearing house for off-loading and transfer of goods into different containers, based on a type of ship once barely known to us and on the use of casks, originally borrowed by the Romans from the civilizations of the Alps and Gallia Celtica.

On the one hand, the problem of how this Lyons pottery was transported is an easy one to solve: one may conclude that, here as elsewhere, it travelled as makeweights among loads of amphorae and casks carried on ships and carts. On the other, we now have not two but three simultaneous innovations in the way the economy of Lyons was organized: the mint, the branch workshops of Italian potteries, and transfer of goods. The first of the three involves the state; the other two imply private individuals, craftsmen, and traders. It is, however, difficult not to treat these innovations as a set of related events and not to link them to the preparations being made by Augustus and Agrippa and the deployment of large military units on the Rhine.

The question is whether one accepts that the simultaneity of these events means there was a rapid and spontaneous response by wine traders and by potters to the establishment of the Rhine forts, or whether we assume that these men were, if not constrained, at least advised, assisted, perhaps even invited in, directly or via intermediaries, by those in charge of the logistics of the conquest. It was in the interest of the military authorities, even when what was at issue was supplies that they were not responsible for, to make sure the troops had at their disposal everything they deemed essential to their well-being.

⁶⁶ Desbat (1991; 1997: 117); Martin-Kilcher (1994), 485–9); Tchernia (1997); Marlière (2002: 194).

⁶⁷ Galsterer, in Kühnborn (1992: 212–14). See the devastating article by Marlière and Torres Costa (2005) on the importance of casks in the northern provinces from late in the first century AD: at *Vindolanda*, in an environment favourable to the preservation of casks, there are four wine amphorae, of a total capacity of 85 litres, and twenty-seven casks, almost all originating from the Lyons area, with a capacity of 10,850 litres. Based on amphorae, the proportion of oil is 85%; if casks are included, this drops to about 20%.

⁶⁸ Although no fish remains have as yet been found in *dolia* from shipwrecks, the imitations of fish-sauce amphorae from Lyons lend strong credence to this.

The first possibility would mean the wine-traders had realized that, given the limited purchasing power of the soldiery, a way to reduce transport costs as much as possible was required. And the potters had realized that the inception of these systematic convoys between Lyons and Germania meant the creation of important markets. All this would have happened within the space of little more than a year. But such rapid reactions would be more consistent with the way market competition functions in theory, rather than with the way real trade happens in practice.

The most plausible conclusion is that the traders were integrated into a plan of logistical organization.⁶⁹ Whether this happened via information, suggestion, collaboration between civilians and military authorities, or the lack of a hard-and-fast boundary between private commerce and state orders, we have no clear and detailed notion of the circumstances that brought it about. There is no need to posit a black-and-white dichotomy such as that proposed by Wells. However, even though we may not accept the idea of a generalized state-run system of consumption in the military sites, we cannot deny that there was a degree of closeness between the organization of the transport of goods in the private sector and the decisions and means of the military supply chain.

Stefanie Martin-Kilcher has produced a brilliant and scholarly study of inscriptions painted on amphorae discovered in Gaul and Germania, in which she points out many cases of a vertical inscription along the handle being added, at a later time and by a different hand, to those already on an amphora when it was originally embarked at the port of departure. Such inscriptions, made on Baetican amphorae containing salted fish and fish sauces, and to a lesser extent on amphorae from the eastern coast of Gallia Narbonensis, provide names or initials of names, followed by numbers. They are not to be found either in wrecks in the Mediterranean or on the amphorae found in Narbonne or Aquitania. Martin-Kilcher demonstrated that they could have been painted on only in Lyons (or in Vienne); and she rightly sees this as proof that, even when there was no transfer of goods into other containers, some of the amphorae changed hands.⁷⁰ They were taken over by

⁶⁹ Statements by Armand Desbat (2001: 30) that 'the role of Lyons as a base camp for the supplying of the *limes* on the Rhine was presumably the main reason for the establishment there of a branch from Arezzo', or by Simonetta Menchelli et al. (2001: 30) that 'the opening of branches in Gaul... was part of the economic strategy designed for supplying the *limes* on the Rhine', seem to me to be consistent with this, while not saying so in so many words. On the rather rapid cessation of production in Lyons, I share the view of Desbat in Desbat, Genin, and Lasfargues (1996: 240–1): exhaustion of fuel led to the replacement of urban enterprises by rural ones in woodland areas such as La Graufesenque and Lezoux.

⁷⁰ Martin-Kilcher and Witteyer (1998–9); Martin-Kilcher (2002). The discovery in Vienne of the largest *horrea* in the Roman world, built about AD 30–40, underlines the fact that the role of the town was parallel to or in competition with that of Lyons. See Helly-Le Bot (1989).

different traders, who were active in Germania and northern Gaul.⁷¹ This separation into two networks meant that each of them covered a territory that, while very elongated, was more manageable than maintaining direct communications over the inordinate distance from Cadiz to the Rhine. Lyons was, in Martin-Kilcher's words, a clearing house, a pivot, a fulcrum for trade between the south and the north. This was what Augustus had planned and he had tried to make sure that traders fitted into these arrangements.

Nevertheless, as Martin-Kilcher also makes clear at the end of her article, what was more necessary than anything else was that there be a market of consumers in the north. As we shall see, from the time of Tiberius this market was to develop in ways that the natural course of events had not foreshadowed.

DEMOGRAPHY

As already stated, Drusus had under his command five or six legions, which had come together on the Rhine between 16 and 12 BC. Their numbers were reduced after the Varian Disaster. However, when Tiberius, at the beginning of his reign, gave up the idea of conquering Germania, he simultaneously reinforced the defence of the frontiers and created what we know as the *limes*. At that time the Romans had eight legions in Germania, 80,000 men if we include auxiliaries.⁷² These forces were intended to remain garrisoned there. As Wierschowski says, this was a situation that was unheard of in Roman history. Even at the time of Drusus' offensive, it was conceivable that the camps were temporary. This same principle of stable organization was to be applied on the Danube.

In the vicinity of the forts, *canabae* grew up—that is, places where soldiers spent their free time; and a little farther away there were the *vici*, more clearly non-military establishments. Over time, the 80,000 soldiers established informal families; and they were accompanied by their *calones*, military slaves. The *canabae* and *vici* housed the *lixae*, the traders, and the artisans, who worked for the army and for individual soldiers, for their women and children, and eventually for all the civilian population who also were attracted, with their own families and their slaves, by the different activities that developed. To all these people must be added, in any of the *vici* that grew into provincial capitals, the legate, his entourage, and the administrative staff. To have an idea of the total population, it would be no exaggeration to say that we could multiply the number of soldiers by four.

Here I must quote at some length from Pierre Gros:

⁷¹ For the exception of the Urittii, see pp. 57–8.

⁷² Wierschowski (2002: 267–8); Verboven (2007b: 303–4).

Paradoxically, it is likely that some of these inorganic collections of shanty towns [the *canabae*] which gradually grew up along the frontiers of the Rhine and the Danube in the immediate vicinity of the permanent legionary fortresses represented the greatest human populations in the West. Such settlements, which under the High Empire never achieved the status of towns or even of mere *vici* (except for *Aquincum*, Budapest), though some of them were remarkably well appointed (one thinks of the famous words of Tacitus [*Hist.*, IV, 22, 2] who, speaking of the *canabae* adjacent to the camp at *Vetera* (Xanten), says they had the appearance, if not the dignity, of a *municipium*), could have had a surface area of 100 hectares or more (*Carnuntum* or *Aquincum*, for instance). There can be no doubt that in the largest of them there would have been 40,000 or 50,000 inhabitants... This phenomenon of the spontaneous town arising in response to economic stimuli, that is, the presence of a large, stable market composed of individuals, the soldiers, who had regular access to ready money, is quite out of the ordinary and at variance with any definition of *urbanitas*, even though some of the largest cities in the West owe their very existence to it.⁷³

With his estimates of population, Gros is referring to the towns on the Danube, *Aquincum* and *Carnuntum*, at each of which there was a fort containing a legion. For a while during the first century, Xanten, Cologne, and Mainz each harboured two legions, which means, including auxiliaries, at least 12,000–15,000 army men. Each of these three camps, along with their *canabae* and *vici*, must have spawned a settlement of at least 60,000–80,000 inhabitants. The first two eventually became *coloniae*. Werner Eck estimates considerably more than 150,000 people in the territory of the *colonia* of Cologne, an area of 4,000 square kilometres. Though generous when gauging the density of grain-producing *villae* and smaller secondary settlements, Eck is not generous enough when it comes to the troops: assessing the numbers in the two legions encamped at Neuss and Bonn (where the legions originally stationed at *Ara Ubiorum* were posted until the time of Trajan), plus what he estimates to have been an almost equal number of auxiliaries, and also the fleet moored to the south of Cologne, his total does not exceed 16,000–18,000 men. This would have to be seen as a bare minimum. If we count the civilians around them, plus the slaves, a total population of 60,000 or 70,000 living between Bonn and Neuss does not seem excessive. At the start of the second century AD, the civilian population of Cologne is estimated to have been 20,000 or 25,000. Three urban centres within a distance of 70 kilometres must have represented a population of more than 80,000 individuals.⁷⁴

By 13 BC, there were two legions deployed to Mainz, where they stayed throughout most of the first century. On three separate occasions, two extra legions joined them for shorter periods of three to eight years, making a body

⁷³ Gros (2000: 77).

⁷⁴ Eck (2004: 312–13; 2007: 54, 63, 71).

of 30,000 soldiers.⁷⁵ The town that grew up round the camp at Kästrich and spread as far as the Rhine must have occupied about 120 hectares, to which should be added the Weisenau camp with its *canabae*. The population of Mainz must have been not much less than those of the towns in the Cologne area; and there were times when it may even have exceeded them.

What this means is that, in numbers of consumers, the largest urban settlements on the Rhine rivalled those on the coasts of the western Mediterranean and the Aegean, with the obvious exception of Rome. Carthage and Corinth, and the towns grouped round the Bay of Naples (which are sometimes overlooked in assessments of population), were probably not very much larger than the Rhine towns. Apart from Pergamon, which was not nearly as far from the sea, these towns of military origin were the largest continental settlements in the Roman Empire. They were almost 1,000 kilometres as the crow flies from the Mediterranean; but part of their populations, including the richest people, came from the Mediterranean and were fond of its olives, oil, wine, and *garum*. In such places, Roman imperialism, its expansion halted, created centres of consumption that far outstripped any of their near or distant neighbours. Their needs could be met because, as regards trade, they had features that, albeit on a smaller scale, were not dissimilar to those obtaining in Rome itself: a part of the population supplied with grain by the state; the transport of private goods facilitated by the transport of public goods; and a proportion of consumers with a higher disposable income than elsewhere.⁷⁶

CONCLUSION

Thus, a whole series of factors converged to promote and make for a free flow of commercial traffic towards the military bases on the *limes*. The density of agents along the Rhône–Rhine axis has been observed long since. As long ago as 1979, Paul Middleton pointed out that inscriptions of *nautae* and *negotiatores* in Gaul were almost exclusively to be found there; a little later, Whittaker added inscriptions of *seviri Augustales* and endorsed Middleton's observation.⁷⁷ In 1995, Gurli Jacobsen, in a systematic review of the archaeological and epigraphic sources on trade in Gaul and Germania, noted a difference between western Gaul, dominated by regional trade, and the Rhône–Rhine axis, a particularly busy theatre of long-distance trading.

⁷⁵ Esser (1972: 213–14); Decker and Selzer (1976).

⁷⁶ Verboven (2007b), though analysing the impact of the military market from a different point of view, complements my own findings.

⁷⁷ Whittaker (1993: xii. 56 (1985); 1994: 106–7 (1989: 59–60 and figs 23–4)).

All these authors focused on supplies for the army, Middleton going so far as to describe private trading as 'parasitic', a needlessly derogatory term, and Whittaker seeing it as 'subsidized', while Jacobsen invented the ideas of *Nebenhandel* and *Folgehandel*. The first of these terms (which could be translated as 'trading on the side') applies to traders who, in between two voyages for the *annona*, used their slack time to sail a voyage for the free market. The second one (which could be loosely translated as 'free-loading') applies to those who fill up free spaces among cargo for the *annona* with goods being transported for other people. This is the interpretation I have relied upon. However, Jacobsen, after Remesal, mistakenly sees the transporting of oil from Baetica as the main pull factor, which gives too much weight to carriage of cargoes for the military supply organization. Strictly commercial transport arrangements must have existed alongside those that benefited more directly from official channels. And the relations between the two sectors were without doubt different in the Mediterranean and the more northerly trading regions.

For this reason, rather than adopting the terms *Nebenhandel* and *Folgehandel*, which tend to minimize the importance of free trade, I prefer to describe these modes of trading as 'interlocked'. This term has the advantage of covering not just the *Nebenhandel* and *Folgehandel*, but also transport, which, though more autonomous, was reliant upon material and functional infrastructure provided by the state, as well as upon the purchasing power of many consumers, a hard core of whom, by living in the settlements that had grown up around the military establishments, received their means of existence from the state. In addition, however, it can also cover situations linked to the provisioning of Rome, especially those arising from the fact that the prefect of the *annona* was active in ways that went beyond distribution.⁷⁸ This was a world, as Catherine Virlouvet says, of 'overt understandings and covert corruption, of secret information and public decision-making'.⁷⁹ To this one could add that it was also a world where information was accessible, where stock-taking was practised and holdings of goods were known, a world of official incentives. It was a world that displayed a high degree of efficiency.

⁷⁸ This matter has been well examined by Christol (2008) in connection with oil from Baetica, so I merely recommend his article, while noting the cogency of some statements, such as the one that defines the annonaary prefecture as 'a public body which invited and facilitated participation by private enterprise'.

⁷⁹ Marin and Virlouvet (2003a: 24–5).

Meeting Needs

There were hawkers who peddled their wares by sea as well as on land, like the Athenian shoe-trader who annually visited Phykous, the port of Cyrene, at the turn of the fourth and fifth centuries, and who one day branched out into trading clothes made in Attica. Synesius, the bishop of Cyrene, took advantage of this to request the purchase of three light summer capes.¹ Much has been made—probably too much—of this purchase by Finley and Whittaker.² There was regional trading, at times covering territory that was rather extensive while remaining strictly limited. An example of this would be the curious amphorae known as Gauloises 12 that were produced in various workshops in Normandy and a little farther south, as far as Chartres and Le Mans, in the second and third centuries. They were probably for conveying wine. They can be found in many places in Normandy, in the Channel Islands, and the south-east of Britannia. But beyond that area, there is no evidence of them, except for two sherds discovered in Scotland and one in Brittany. None has ever turned up south or east of the most southerly workshops.³ There were trading enterprises that began with a regional focus but then expanded into the delivery of goods to major centres of consumption. This was the case with wine from Hispania Tarraconensis: soon after the middle of the first century BC, amphorae produced in Catalonia between the Ebro and Ampurdán were first dispatched to Aquitania and in small numbers to the valley of the Rhône, before reaching as far as Rome and many other places some years later.⁴ There were other trading enterprises, secondary ones, branching off from a central stem with smaller consignments for delivery to places where there were wealthy enough customers. This seems to be the explanation of the Baetican oil amphorae found in the valley of the Loire and in central Gaul.⁵ There were

¹ Synesius, letter 54.

² Finley (1985: 33 (1973: 38)); Whittaker (2004: 174).

³ Laubenheimer and Lecquoy (1992); Misonne et al. (1998).

⁴ Liou and Corsi-Sciallano (1985); Liou (1987b); Miró (1988: 120–3, 189–97); Carreras Monfort (2009).

⁵ See the maps in Ehmig (2003), and Fig. 3.1.

redistribution ports, where local traders could get supplies for delivery to less important towns.⁶ There was luxury trading which could deliver to all corners of the Empire, albeit with sporadic distribution and in limited quantities. Obviously, this was trade in exotic items (the fact that Tagarminis, a soldier at *Vindolanda*, bought two denarii-worth of pepper does not mean pepper was not a luxury product⁷); but the later Dressel 2–4 amphorae from the late second century and the third century, containing quality wines from Campania, were part of it too. They have been attested from Tarragona to Cyprus and from Carthage to South Shields, though nowhere in great numbers, and more frequently in rich cities such as Rome or Lyons. The most substantial discovery was made at Saint-Romain-en-Gal, opposite Vienne: a homogeneous group of 52 amphorae in two *cellae* in a small warehouse; and a collection of 102 sherds, meaning at least 5 amphorae, found at South Shields, the site of a depot for supplying the forts along Hadrian's Wall, is 'a remarkable total'.⁸ The distribution of alum amphorae is similar: alum was an indispensable product for colour-fast dyers and tanners and could only have come from two sources, Lipari and Milo.⁹ The difference, however, is that sometimes thousands of sherds are found in the vicinity of working sites. The situation was one of oligopoly and a captive market. There were private orders filled on occasions from long distances away, such as those for the Governor of Raetia already mentioned (Ch. 3, p. 81); to these can be added the thirteen amphorae of wine ordered by Herod the Great from Apulia and found at Masada, bearing the consular date corresponding to 19 BC, mention of a *philonianum* wine, a word deriving from Philonius (the *gentilicium* or family name, attested almost exclusively at Brundisium), the title of the estate of L. Laenius, and the dative form of Herod's name, *Regi Herodi Iudaicoi*.¹⁰ There were return cargoes on annony vessels, which is why amphorae from Baetica are to be found in Egypt,¹¹ and a far from negligible quantity of bricks from the Rome area turn up in Carthage, along with lesser amounts of them in other African towns, in Sardinia, around the Rhône delta, and on the coasts of Hispania Tarraconensis—they made good ballast.¹² There were seaboard from which short, direct routes gave access to a natural market

⁶ Nieto Prieto (1997). ⁷ *Tab. Vindol.* II. 184, 4; see Pearce (2002).

⁸ Desbat and Savay-Guerraz (1990); Arthur and Williams (1992); Tchernia (2013).

⁹ Borgard (2005).

¹⁰ Cotton and Geiger (1989: 140–60); Manacorda (1998: 323).

¹¹ See pp. 271–2.

¹² Rico (1995); Thébert (2000). The latter points out that, even if bricks may have served in some cases as ballast, this 'in no way alters the commercial dimension of the operation'. This is true, but it cannot be considered as direct evidence for 'the intensive commercialization of products, typical of the Roman Empire', since the only reason they became an item of trade to Africa was the opportunity of using them for the two purposes of ballast and sale. Rico (2004) gives a balanced and detailed account of the discussion.

in Rome. And, finally, there were various modes of mass long-distance transport of goods over a period of two centuries or more that required harbours, warehouses, roads, and networks of traders. Though these traders may not necessarily have participated in the carrying of supplies necessary to the state (grain, metals, weaponry) or for the emperor's use (marble), they benefited from it. In brief, all forms of trade in the Roman world cannot be seen as fitting a single model.

This is even more the case when the great break between the period of the Republic and the period of the Empire is taken into account. The graph by A. J. Parker,¹³ often reproduced,¹⁴ plotting the number of wrecks found in the Mediterranean, shows a meticulously regular line that charts the climb and the descent: from 500 BC it rises, reaching the high point of the double column of the first century BC and the first century AD, followed by an exactly symmetrical decline (see Fig. 5.1). The neat regularity of this image is misleading, because the division into centuries is insufficiently precise.

Another diagram, printed on the following page in Parker's work, shows wrecks in the western Mediterranean, broken down by half-centuries. There is no fine regularity here. After the highest peak of all in the first half of the first century BC, the numbers fall off in the second half and barely reach the levels of the second century BC (Fig. 5.2). We can take these observations farther by not restricting ourselves to the western Mediterranean, since in Parker's preliminary pages there is a list of wrecks catalogued, set out in detail and in chronological order. The drop-off in the second half of the first century BC is just as visible (see Fig. 5.3). Andrew Wilson and his team have recently revisited Parker's data, using a different method for the dating of wrecks which can be plotted only with a wide range of possible inaccuracy:¹⁵ the dip in the second half of the first century BC is still apparent, if slightly less marked (Fig. 5.4).¹⁶ It is still clear in a graph showing only the 596 wrecks that have been accurately dated.¹⁷

If we look at the composition of the different groups, it can be seen that the vast majority of the west Mediterranean wrecks dated between 150 BC and 50 BC

¹³ Parker (1992: fig. 3).

¹⁴ Again recently in Scheidel, Morris, and Saller (2007: 572), by De Callatay (2005), and Jongman (2007). De Callatay and Jongman draw a parallel between the wreck curve and the curve of lead pollution shown by ice samples from Greenland ice cores, aiming to show significant similarities. This is hardly valid when considered in detail: apart from a single barely comprehensible peak, the lead curve is at its highest in 266 BC, then drops pretty regularly until AD 126 (see the precise dates in Domergue 2008: 212, fig. 126, and comment on 213). The wreck curve was used by Keith Hopkins (1980), set out as a histogram in blocks of two centuries, which made it look even more impressive. His observations in (2002: 211–12) do not touch on the matter I am dealing with here.

¹⁵ Method of probabilities by year ('graphed according to an equal probability of sinking in any year during the date range of each wreck'), whereas Parker averaged the dates.

¹⁶ Wilson (2009: 223, fig. 9.4).

¹⁷ Wilson (2011: 36, fig. 2.6).

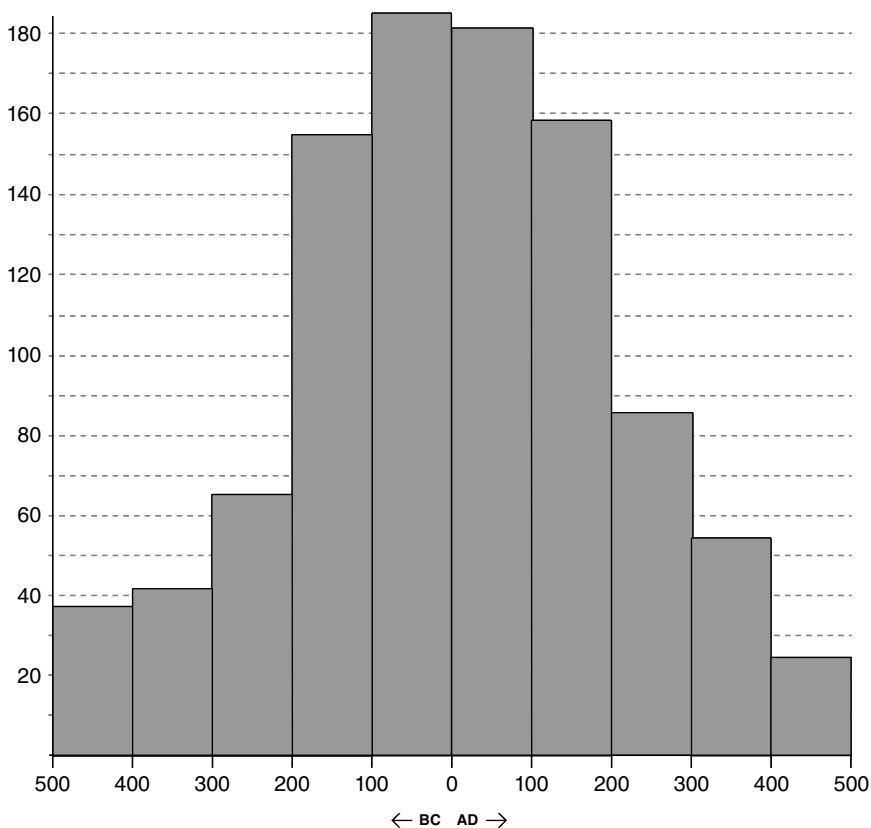


Fig. 5.1. Mediterranean wrecks between 500 BC and AD 500, a histogram by centuries. (After Parker 1992: fig. 3)

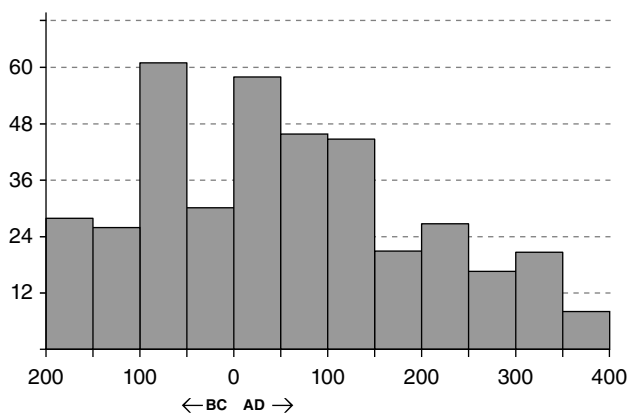


Fig. 5.2. Western Mediterranean wrecks between 200 BC and AD 400, a histogram by half-centuries. (After Parker 1992: fig. 5)

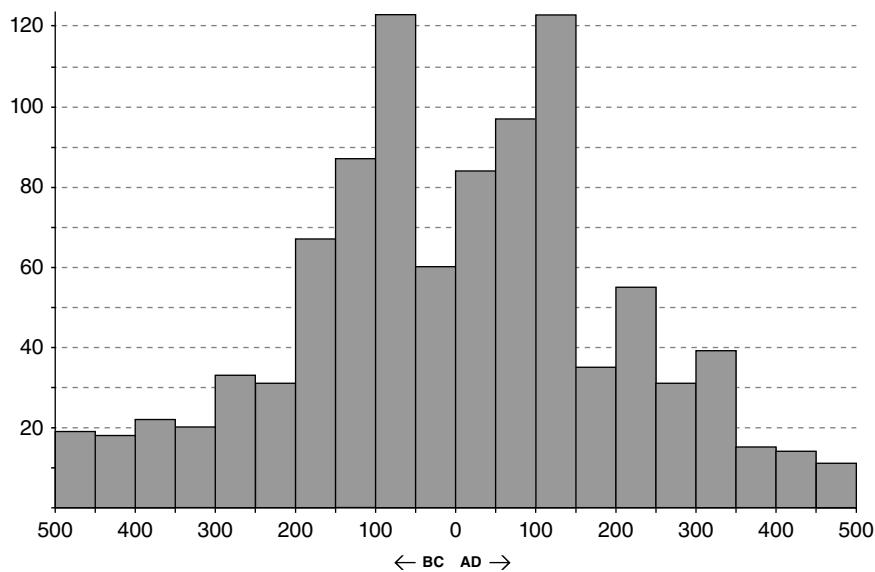


Fig. 5.3. Mediterranean wrecks between 500 BC and AD 500, a histogram by half-centuries. (After Parker 1992: 10–14)

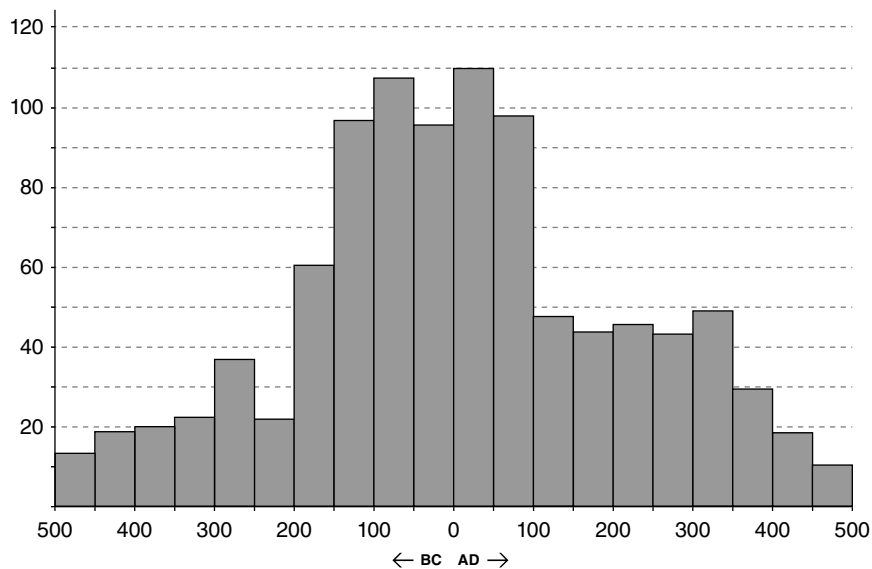


Fig. 5.4. Mediterranean wrecks between 500 BC and AD 500, a histogram by half-centuries. Wreck-dating by the method of probabilities by year. (After Wilson 2009: 223, fig. 9-4)

were carrying Greco-Italic Dr. 1 or Lamboglia 2 amphorae—in other words, mostly wine from the Tyrrhenian side of Italy and in lesser quantities wine from the Adriatic side. These amphorae are still the majority when one includes the total wrecks from all over the Mediterranean at that period. From the time of Augustus onwards, there is much greater diversity in provenance and contents. Wrecks from Baetica are the most numerous; but their contents are various, and, unlike the Italian amphorae in the preceding period, they do not predominate.

The export of Italian and Aegean wine in the second century BC and the first half of the first was a discrete phenomenon. In the main, this wine was an item for barter, to be swapped for slaves, metals, livestock, and skins, as Diodorus of Sicily states about Gaul, Strabo about the peoples of the Danube, and Polybius and Strabo about the Black Sea.¹⁸ It was ‘cross-cultural trade’ with the world of barbarians and pirates, with terms of exchange that the Romans saw as very favourable and where transport costs were all but irrelevant. In this way, they acquired many ‘necessities’, as Polybius puts it, a category of things in which he includes slaves and livestock, while defining honey, wax, and salted-fish products as optional extras.¹⁹ Gaul, where remains of Italian amphorae can be found by the hundred thousand in excavations of large *oppida*, was a prime destination for them.²⁰ Wine-drinking was ritualized in Gaul, in gatherings that might bring together several thousand people for what we call, for lack of a better word, banquets, events whose character was euergetic, political, and sacred all at once; and this was the stimulus for these imports. Gaulish drunkenness, which was proverbial in the ancient world, was actually a social institution best summed up by Tacitus’ albeit anachronistic words about the Germani:

the mutual reconciliation of enemies, the forming of family alliances, the appointment of chiefs, the question even of war or peace are usually debated at these banquets...on the next day the matter is handled afresh...deliberation comes when they are incapable of pretence, but the decision when they are secure from illusion. (trans. M. Hutton)²¹

This trade is utterly different from the monetary purchases made individually by city-dwellers and legionaries under the Empire by way of adding variety to their daily fare. There was no continuity between the imports of Italian wine by *oppida* in independent Gaul and the imports of varied products to the forts along the *limes* and the cities of Roman Gaul.²²

¹⁸ Diodorus, V. 23, 6; Strabo, V. 1, 8 and IV. 6, 12; Polybius, IV. 38, 4–5; Strabo, XI. 2, 3. See also Sallust, *Jug.* XLIV. 5.

¹⁹ See Introduction, n. 26.

²⁰ See Ch. 18.

²¹ Tacitus, *Ger.* XXII. 1. See p. 285.

²² This must be restated, for, despite the work of Matthieu Poux, the case is not an easy one to win: Sealey (2009: 23 *in fine*); Silver (2009: 432–3). These authors seem to see Caesar’s conquest

The enormous amount of bartering evidenced by the wrecks carrying Greco-Italic Dressel 1 and Lamboglia 2 amphorae came to an end in the second quarter of the first century BC. The great slave market on Delos vanished after the sack of 69 BC and after Pompey's victories in 66 over the pirates who had supplied the slaves. For other reasons, trading with Gaul went the same way after the conquest by Caesar and the subjection of the Gaulish nobility, who were now living in towns and deprived both of their goods for barter and their festive, euergetic, and political gatherings.²³ In the future, to replenish its supply of slaves, imperial Italy would rely much more on natural reproduction or bringing up abandoned children.²⁴

This was the break that appears as the dip in the wreck curve (see Figs 5.2, 5.3, and 5.4), at least as far as produce transported in amphorae is concerned, since the numbers of wrecks evidently account for only part of what was traded. The establishment of the annonary provinces, Sicily and Sardinia, intensified grain transports to Rome and began to open up regular routes that larger ships could ply.²⁵ Such ships have not left traces detectable by divers; otherwise, we would see a regular increase in the numbers of wrecks of ships bound for Rome, except for interruptions caused by warfare and pirates. Polybius gives a picture of the silver mines of Cartagena in full production in the middle of the second century BC;²⁶ yet the first wreck transporting lead ingots from Baetica, the one at Mal di Ventre Island west of Sardinia, does not turn up until the second quarter of the first century. It is the only wreck to have been carrying solely lead: 983 ingots of 33 kilos each have been salvaged from it. It is likely that for a long period metals were transported unaccompanied by any other goods and that they would have been stowed at the bottom of the hold, for obvious reasons related to their density, and the wrecks carrying them would, for the most part, have been buried by sand.

On the other hand, between the late first century BC and the middle of the first century AD, we have no fewer than six wrecks that were carrying mixed cargoes of amphorae plus ingots laid deep in the hold.²⁷

This supports the idea of David Mattingly and Bruce Hitchner that the trail to Rome was blazed by metals, thus facilitating the later surge in products

as having had little impact on Gaulish society, customs, and consumption; and in their view the same economic model applied to independent Gaul as to the provinces organized by Augustus and Agrippa.

²³ See p. 292.

²⁴ Harris (1980, 1999); Giardina (1997: 251 ff.); Scheidel (1997); Lo Cascio (2002).

²⁵ See pp. 159–60.

²⁶ Polybius, X. 10, 11 and XXXIV. 9, 8, *ap.* Strabo, III. 2, 10.

²⁷ Mal di Ventre: Parker (1992: no. 637); Salvi (1992). Other wrecks: Domergue (1998), complemented by Domergue et al. (2003) for the Comacchio wreck (see also Parker 1992: no. 1206).

from Baetica.²⁸ Strictly speaking, metals were not annonaary goods; but the state's need for them was great, as Claude Domergue has shown.²⁹ Trade with Baetica was also of the 'interlocked' variety. But this still leaves two unanswered questions: why was metal exported unaccompanied for a century, and why do produce from the salted-goods suppliers not turn up until the middle of the first century BC and olive products until the final quarter? Similarly, the oldest wrecks of vessels bound for Rome with wine from Hispania Tarraconensis date from about the start of the common era.³⁰

After the end of bartering wine for slaves, a very different disruption happened in the second half of the first century BC. Distribution of cut-price wheat to the plebs in Rome became free of charge in 58 BC. Until almost the start of the common era, between 250,000 and 320,000 Romans benefited from this, and 200,000 went on benefiting from it till the end of the reign of Augustus.³¹ And, when Augustus also initiated cash handouts to the same number of people, the sums distributed reaching a total of 668 million sesterces³² between 44 BC and 2 BC, there was a sharp increase in demand for products that all the beneficiaries who lived just above subsistence level now wanted to enjoy more regularly.³³ As far as food was concerned, this increase affected wine, oil, and anything considered as *obsonium*, to be eaten with bread, a purpose that salted sardines or tuna served well. Over this same period, it is certain that the population of Rome was also rapidly increasing. Far from the centre, the campaigns in Illyricum and the troops in Germania likewise served as a stimulus to demand. There is nothing surprising in the fact that products carried in amphorae, such as wine, oil, fish, and fish sauces, were being delivered along the Rhône, the Rhine, and the Danube, or that, round about the start of the common era, Rome was seeking its provisions from farther afield than before. There were now a great many more consumers than there had been thirty years earlier. Precious metal, hitherto lying idle in Gaul or Egypt, was now circulating in the form of coinage. Seaborne trade and produce from the most favourably situated seaboard, after having been disrupted between 44 and 36 BC by the civil wars and the obstruction to shipping caused by Sextus Pompey, now responded to these new needs. At the same time as a considerable development of goods imported from Baetica, salted-fish production was also increasing on the coasts of Campania, southern Italy, and Sicily, to be exported in Dressel 21–22 amphorae and sold round

²⁸ Mattingly (1988: 52–4); Hitchner (2002: 74 (1993: 501)).

²⁹ Domergue (1994); Domergue et al. (2003); Domergue et al. (2006) for Agrippa's ingots.

³⁰ Liou and Corsi-Sciallano (1985); Carreras Monfort (2009).

³¹ Here I am following Virlouvet (1995a: 184–205); Caesar's reduction of the number of beneficiaries to 150,000 did not apply until after the death of Augustus.

³² Including the will of Agrippa: *Res gestae*, 15; Frank (1959: v. 14–16); Ridley (2003: 116).

³³ Cf. Ch. 4, 'Grain was a Giffen Good'.

the Bay of Naples and in Rome.³⁴ Supply had some trouble in keeping up with demand.³⁵

By conquering the *oikoumene*, Rome had caused shifts of wealth and populations. Wealth accumulated in the capital between the eastern conquests and the conquest of Gaul with all its gold, and the acquisition of the fabulous booty from Egypt. Those who profited first from such wealth were the senators and tax-farmers. Lucullus and Crassus were, respectively, twenty and forty times richer than Scipio Africanus had been; and in the Verrine speeches we glimpse vessels transporting luxury goods and slaves, none of which has left evidence detectable by archaeologists. But the wealth of Rome, as the capital became an outsized megalopolis, eventually benefited the whole population. Thus there developed a market of consumers for more everyday produce, outstripping everything that had gone before. It is what explains the list in *Revelations*, quoted in my Introduction, and the high prices in Rome. The system was augmented by colonization in the early days, before the settlers had managed to develop their crops, and especially by the deployment of the armies round the periphery. The new urban settlements were linked to the productive areas by roads that brought in the goods required or demanded by the state. In this way, traders could rely on having a regular flow of goods, conditions of transport were facilitated, and merchants felt encouraged to develop their private businesses. It was all this that gave rise to and sustained the most spectacular of the commercial movements that the evidence shows were happening at the time of the Empire. Production, too, got lasting stimulus from an economy that was nowhere near saturation point. Until the end of the second century AD, production of the three main commodities transported in amphorae expanded over larger and larger tracts of land. After the start of wine exporting to Aquitania from Hispania Tarraconensis in the years following the middle of the first century BC, there was rapid growth of vine-growing in Gaul from the time of Augustus, at first along the valley of the Rhône, then in the south-west, and later in the Loire valley. This expansion did not stop until the third century AD, in the Moselle region. Oil from Africa Proconsularis began to develop from the end of the first century AD, with no apparent adverse effects on oil from Baetica. In the second half of the first century AD, the large fish-salting factories in Lusitania were added to those in

³⁴ Botte (2009).

³⁵ This argument does not accord, however, with the situation of oil from Apulia, which dwindled away soon after the start of the common era. This is one of the rare instances (the replacement of late Italic terra sigillata by African sigillata being another) in which competition among regions seems clear and ruthless: Apulian oil was caught between the development of Istrian oil to the north, oil from Baetica to the west, with its ability to benefit from the carrying of mixed cargoes, and oil from Tripolitania to the south, where *Lepcis Magna* had to pay off, over a period, the fine imposed by Caesar in 46 BC; on which see Wierschowski (2001: 50).

Baetica; and, in the course of the second century, the same thing happened with production from the east coast of Africa Proconsularis.

This theory sees the development of new geographical balances and new needs as the prime mover of large-scale trade in the Empire and the extensive increase in production in regions most favoured by the geography of transport. There was plenty of scope for greater exploitation of resources.

It is a theory that may appear to be at variance with others, such as Keith Hopkins's 'Taxes and Trade' model, which stresses how supply was affected by taxes imposed in the provinces. In places, essentially the western provinces, where before the conquest peasants had little experience of having to pay taxes in coin, they found themselves obliged to produce and sell surpluses that either they had never produced before or had consumed themselves. In provinces where the state was the consumer—that is to say, those where troops were stationed—it spent locally the tax income that it earned; and so trade flows were also local. Elsewhere, despite the risk of causing a lasting imbalance, which in theory would lead to disruption, it was necessary for at least some of the produce sold by farmers to be sent to the places that benefited from taxation monies and also spent them—namely, Rome and the armies.³⁶ Despite a few problems of chronology,³⁷ the model devised by Hopkins, and more particularly developed by von Freyberg,³⁸ gives a satisfactory macro-economic explanation of how there could be a long-standing financial imbalance between the regions where money was spent and the others: it was compensated for by an inverse commercial imbalance. However, the model finds it harder to explain how farming by agricultural producers obliged to earn money so as to pay their taxes could give rise to long-distance trade flows. Hopkins was well aware of this difficulty; but his only solution to it was a hypothesis that it was utterly impossible to verify: peasants who paid taxes sold their produce in the local marketplace, where it was bought by artisans who turned out goods that were easier to transport and transform into surplus value: 'textiles, leather goods, pots'. The first two, being perishable, leave no archaeological evidence; but pottery must be seen as standing for them.³⁹

In revising his model twenty years later, Hopkins adopted some suggestions from von Freyberg and used a different explanation. The concentration of

³⁶ Hopkins (1980: 102–3).

³⁷ Gallia Narbonensis, for instance, exported very little wine before the Flavian period; nor did Africa Proconsularis export oil before the second century AD. Zelener (2000: 232 and n. 44) had identified the difficulty from the point of view of the situation in Africa: 'This is the temporal discontinuity problem of the taxes and trade model. A more robust model of the Roman economy would need to account for both regional differentiation and temporal discontinuity.'

³⁸ Freyberg (1989).

³⁹ Hopkins (1980: 102). See Hopkins (2002: 209), for a more sophisticated version. Those who accept Hopkins's model pay little attention to this stage in his argument and apply his model directly to agricultural produce. See Ch. 16.

population and purchasing power in Rome meant that prices in the city were much higher than elsewhere. Goods arrived in Rome 'macroeconomically to help debtor provinces pay rents and taxes, but microeconomically because individual traders hoped to make huge profits by selling goods in the highest-priced metropolitan market'.⁴⁰ By introducing prices into his model, Hopkins explains the impetus given to trade by market changes in response to the influx of taxation monies to Rome, rather than by the obligation put upon provincial farmers. He goes from an economy of supply to one of demand, putting traders back at the heart of the system. This seems to me to come quite close to my own position. But it is generally the original version of the Taxes and Trade model that continues to be used, despite the fact that it has been largely demolished by its originator.

The difference between the two versions is, however, an important one. For, in many cases, the dichotomy between scholars arguing for demand and those arguing for supply, between those who believe that the economy in the ancient world was needs-driven and those who prefer terms like 'capturing new markets', underlies current disagreements about the Roman economy.

Cicero, discussing the role of traders in society, approves of 'those who [import] large quantities from all parts of the world and [distribute] to many' (trans. W. Miller). Of the two actions entailed in trading, acquisition and distribution, his clear preference is for the latter. Seneca says the same thing, via a comparison: 'the trader renders service to cities, the physician to the sick' (trans. J. Basore).⁴¹ There are plenty of other texts supporting this way of thinking; and I endorse the view of J. Banaji: 'Throughout Antiquity and the Middle Ages, "trade" meant "import trade"'.⁴²

It is true that what we are dealing with here is representations; and to question whether, in practice, the behaviour of those engaged in trade really matched this image is perfectly valid. For instance, a recent article by Jean-Paul Morel on relations between pottery and the market, an article, be it noted, informed by the broadest possible knowledge and experience of ceramics under the Republic, takes the contrary view, that 'workshop owners in Naples were obviously motivated, if not obsessed, by the urge to sell and to capture new markets'.⁴³ This not only contradicts Banaji, who argues that active seeking of sales outlets and markets did not begin till the Industrial Revolution, but is also at variance with one of Yvon Garlan's conclusions to a book on Greek amphorae. Dealing with two matters, competition and the role of supply, Garlan says:

Any competition was presumably greater among buyers than among sellers, affecting demand rather than supply. Indeed, everything suggests that the prime mover in

⁴⁰ Hopkins (2000: 261; 2002: 220). See Lo Cascio's comment (1994: 102–3).

⁴¹ Cicero, *Off.* I. 151; Seneca, *Ben.* IV. 13, 3.

⁴² Banaji (2006: 325). Cf. Whittaker (2004: 174): 'The trading attitude was in antiquity, as later in the Middle Ages, "provisionist".'

⁴³ Morel (2008: 166).

ancient trade was generally the need for products essential to the community and not the need to shift excess stock. No evidence has been found of different commercial interests competing for sales in retail markets.⁴⁴

All this amounts to a genuine diversity of opinion, with plenty of scope for solid arguments to be added to the discussion. Those scholars who are still called 'primitivists' and those who see little difference between behaviours in Antiquity and behaviours in our own time could usefully engage with its more circumscribed and better-defined parameters, rather than continue to present papers that go in for the same old simplistic and all-out confrontation.

Clearly, it is arguable that, if there are several traders selling the same item in the same place and there is price-setting, then there is competition.⁴⁵ It is equally obvious that Roman traders took opportunities and were aware of needs, that they tried to meet these needs in ways most profitable to themselves, and that they had no objection to making profits on the side. They organized themselves to this end, with courage and talent and by expending a great deal of effort. Were they in competition? Were they constantly concerned to increase their sales and extend their market? Did they take steps to investigate ways of doing so? There is no evidence for any of that. It should be remembered that the tireless trader who might 'rush to the furthest Indies' (trans. H. R. Fairclough)⁴⁶ was not out to capture a market; he was intent on acquiring goods that would satisfy the Roman aristocracy's lust for conspicuous luxury. Traders were often accused of price gouging and hoarding, but never, it would appear, of practising dumping or penetration pricing.

The real question in this matter of competition is whether it ever turned into the sort of battle of economic ploys that we see nowadays. In modern saturated economies, the standard image of the merchant is someone who is out to create demand, tampering with prices to outflank opponents and impinge upon people hitherto unaffected by the saturation. Like Yvon Garlan, I can think of no text presenting such an image of ancient traders.⁴⁷ Did the five or ten traders from Baetica who shared the same ship for transporting their goods turn against one another as soon as it docked? This was certainly not how they behaved towards either their freedmen or their fellow traders, who regularly joined them as partners in short-lived collaborations or to whom they became related through marriage. Did the unvarying use of

⁴⁴ Garlan (2000: 187 and n. 57).

⁴⁵ This is the basis of the arguments used by Andreau, who does not dwell on the combative aspect; see (1997: 328–30 (1994)); cf. (2010: 175–6, 83, n. 103) for the passages from the *Digest* about the eventuality of competition between master and freedman. For examples of interpretations inappropriately assuming there was competition, see Ch. 19, pp. 313–14.

⁴⁶ Horace, *Ep.* I. 45.

⁴⁷ However, after publication of that statement, Elio Lo Cascio drew my attention to a sentence in Cassiodorus (*Var.* IV. 5,3): *Ad saturatos cum mercibus ire certamen est* ('If one is to sell one's wares to sated consumers, there is competition').

auction sales regulate competition so much that it did not manifest itself elsewhere? Or was this a world in which understandings and domination were taken for granted, and rivalries, if they existed, were sorted out at an earlier stage, without impinging on the economy or the market?⁴⁸

In most cases, the Roman economy was anything but saturated. To accept that there were deals of exceptional magnitude is in no way to invalidate Finley's idea that "satisfaction of material wants" is the key concept'.⁴⁹ Traders found it hard enough to do this; and they took advantage, more than Finley gives them credit for, of the particular form taken by those material wants in the Roman world.

⁴⁸ On the potential role of high-placed personages acting as patrons towards traders, see p. 69 on slave traders, and p. 262 on the Balbi and the development of commerce in Baetica.

⁴⁹ Finley (1973: 214; 1985: 160).

Part II

Scripta varia

Some updating will be found either in the footnotes or at the end of some of these chapters. Such additions are italicized inside square brackets [*thus*].

Dreams of Wealth, Loans, and Seaborne Trade

In the second century AD, Lucian devoted the bulk of a well-known dialogue, 'The Ship: Or, the Wishes', to the daydreams of the Athenian Adeimantos on being given a tour of a great ship carrying grain from Alexandria that had put in at Piraeus: if only he were the owner, how much better his position would be, what a pleasant life he would have! I think there is an enlightening comparison to be made between this text and another one, older and less well known, from Cicero's *Brutus*, reporting a speech for the defence by the orator Crassus (140–91 BC). In responding to a charge of improper solicitation of a legacy, Crassus began by saying that the case was reminiscent of the story of a young dandy who, having found a swivel rowlock on the beach, got carried away by the notion of building it into a ship: *ab adulescente delicato, qui in litore ambulans scalum repperisset ob eamque rem aedificare navem concupivisset exorsus est* (*Brutus*, 197).

It may be objected that the ship in question had oars, which means it was a warship. But some merchant ships, such as *actuariae*, had oars; and it is not clear to me why the *adulescens delicatus* would have wanted to build a fighting ship. It is obvious that Crassus is alluding to a well-known, proverbial story, presumably a sort of Latin or Greek antecedent of folk tales such as 'The Little Ploughboy' or La Fontaine's fable *La Laitière et le pot de lait* ('The Milkmaid and the Jug of Milk').

So I take this text as another indication that envious members of the lower classes saw ownership of a merchant ship as a good way of climbing fortune's ladder. It is the way chosen by Trimalchio in Petronius' famous novel: not content with the fine legacy left to him by his master, he decides to take his chance with maritime trading; and, after losing all his ships on the first voyage, he becomes fabulously rich on the second. Though it should certainly not be taken as reflecting reality, the *Cena Trimalchionis* is nonetheless, like any

caricature, a good send-up of accepted ideas, in this case ideas about upward social mobility. The character of Trimalchio has been so frequently discussed by modern historians that his rise has become a fixture in our minds. It should be remembered that such ventures may just as often have ended in failure, as can be seen from a sad inscription found on the *Via Salaria* in Rome,¹ referring to a true story, as it happens. It recounts the fate of L. Licinius Nepos, whose life had given cause for complaint to no one:

He hoped to become rich through trading [*negotiando*], but was deceived by hope and by many friends, though he had deserved well of them. As his final dwelling place, he built this little structure on a narrow plot, reduced to investing in it more care than money . . . so that his bones and his ashes and those of his brother Caius might rest here, and to bear witness that he lived by hard work and with no security.²

The first problem with such texts, which have in common the dream, hope, or myth of enrichment via maritime trading, is the relation between owning ships and engaging in large-scale trade, in other words, between ship operators and traders. Some time ago Jean Rougé (1966: 280) showed that, under the Empire, it was quite usual for traders to be shipowners. This was the dual role given by Petronius to Trimalchio; and I have assumed that the same idea had occurred to the young dandy in *Brutus*.³

This problem is a little more complicated in the case of Adeimantos. Initially (§13), he dreams that he owns the great ship that has put in at Piraeus and that he earns as much as its present owner (*despotēs*), which he has been told is twelve Attic talents. Then (§18), he gets completely carried away by his imagination: 'May the ship and all in her be mine—cargo, merchants, women, sailors, and every sweetest treasure in the world' (trans. K. Kilburn). Even if this particular dream is now out of touch with reality, it shows that, in its initial phase, the character could see himself as *despotēs tou ploiou*, different from the *emporoi*, that is, and that the whole shipload did not belong to him.

As for the profits he envied, the twelve Attic talents, this figure, though it should clearly not be taken as reliable evidence, is not entirely fanciful, and its place within the range of incomes at that time can be quite accurately evaluated. Calculated in weight of silver, twelve talents are the equivalent of 72,000 *denarii*, which was roughly the remuneration of the highest-paid equestrian procurators, the *trecenarii*. This represents a substantial income,

¹ CIL VI. 9659 = ILS 7519.

² This inscription is not always easy to interpret. For the first sentence, I have adopted the version suggested by Dessau's punctuation, which differs from that by H. Jordan (1880). [Now see Panciera and Zanker (1990).]

³ [Another one to add is Gripus from Plautus' *Rudens* (930–1): in the belief that he has found a treasure, he dreams of buying his freedom, setting himself up in style, and achieving great wealth 'by trading with big boats'.]

being the same as that of the highest state administrators. However, it is not a fabulous sum, being definitely much less than the incomes of the wealthiest men of the time. Can we conclude that it is roughly equivalent to the earnings of a shipowner who is not a trader?

The problem is that it has been pointed out, in respect of periods that are much better documented, that trade brought in much more money than shipbuilding. Jacques Heers (1971: 230–3) observed years ago that, in fifteenth-century Genoa, many shipowners were in debt or bankrupt: ‘Running a ship was not at all lucrative.’ More recently, in 1979, W. Brulez, known to me only via H. W. Pleket (1983: 138), broadened the demonstration to include the entire West in the fifteenth and sixteenth centuries. Brulez identifies only one exceptional case: some owners in the Hanseatic towns had high social standing, though he assumes they were owner–traders.

Can a text by Lucian support the idea that shipowners in the Roman world earned more money than their counterparts during the Renaissance, given all that this would imply about the high cost of transport, and so on? Whether the sum in question is accurate or not, there can be no doubt that the owner of the *Isis* enjoyed an enviable position. But the text is not clear enough to rule out the possibility that he was, like the wealthy Hanse townsmen, both an owner and a trader. Some of the shipboard space that he rented out to traders he may have kept aside for his own commercial operations; and, on other voyages, he may have reserved the *Isis* for his exclusive use. The evidence of this one text is too slight, and there are too many unambiguous cases of owner–traders, for us to exclude the possibility.

We can now move on to consider the second problem, which is a much greater one: how close to reality were such dreams of making a fortune through maritime trade?

Table 6.1 includes several texts from the late Republic and the Empire that illustrate ways of becoming wealthy: two of the categories—agriculture and *navigare* or *negotiari*—are practically omnipresent. The only texts in the table that I propose to discuss are the two that are at once the most unexpected and the most questionable. The Suetonius passage is included only on the strength of the list of gifts distributed to the public during Nero’s *Ludi maximi*: birds, vouchers for grain, gold, silver, pearls, paintings, slaves, trained wild animals, and so on., ‘and lastly, ships, buildings, and farms’. Those last three items on the list are separated from the rest by the word *novissime*, because they are of a different kind: they are ways of achieving wealth. This list sheds light on an enigmatic sentence in Sallust’s preface to *De coniuratione Catilinae* II. 7. Having divided human powers into physical and mental, he shows that, even for warfare, the mind is the more important. Then he adds: *Quae homines arant, navigant, aedificant, virtuti omnia parent* (‘Success in agriculture, navigation, and construction depends invariably upon mental excellence’) (trans. J. C. Rolfe, adapted). In other words, even to earn money

Table 6.1. The different sources of profit

Reference	Agriculture	<i>Navigare/ Negotiarī</i>	Moneylending	Buildings	Other
Sallust, <i>Cat.</i> II. 7	<i>Quae homines arant,</i>	<i>Navigant</i>		<i>Aedificant</i>	
Columella, I, <i>Pr.</i> 7–10	<i>Agricoltura</i>	<i>Maris et negotiationis alea</i>	<i>Faenaratio</i>		Booty, delation, clienteles, public honours
Seneca, <i>Quaest. Nat.</i> IV, <i>Pr.</i> 7	<i>Incerta fides ruris</i>	<i>Fortuna maris; emendi vendendique lis</i>	<i>Incertior fides fori</i>		
Seneca, <i>Ep.</i> 17, 10		<i>Ex merce compendium</i>	<i>Fenoris quaestus</i>		Legacies
Suetonius, <i>Nero</i> , XI. 4	<i>Agri,</i>	<i>Naves,</i>		<i>Insulae</i>	
Ptolemy, <i>Tetrabiblos</i> , IV. 2, 174	<i>Γεώργια</i>	<i>Ναυκληρίαί, ... ἐμπορίαί</i>	<i>θεμέλια</i>		Acting with power of attorney, priesthood, military life, gifts, oratory, legacies
<i>Digest</i> , XIV. 3, 5, 2	<i>Agrum colere</i>	<i>Mercatum facere</i>	<i>Pecuniam faenerari</i>		Tax-farming

from agriculture, maritime trading, or property speculation, the main thing is to be clever.

We must now try to understand why, of the four most standard ways of making money (agriculture, letting out buildings, moneylending at interest, and maritime trading), it was the last one that inspired so many dreams. Two reasons come to mind: first, that it represented a double-or-quits deal in which (in the public mind, at any rate) one could win the jackpot with a single fortunate throw, like Trimalchio; and, secondly, there was a prohibition, of social rather than legal force,⁴ which forbade senators—in other words, the wealthiest of the Romans—to engage in it overtly. So there was greater scope for men of more modest means to play a part; and it can probably be assumed, as we shall see, that it was also easier for people who wanted to get started in business to borrow money from those who had considerable reserves of capital but preferred not to engage directly in such matters.

⁴ In the text of the *Lex Iulia* given by Paulus (*Sentences*, Leyden fragment, 3) owning a boat *in quaestum* is forbidden to senators. In other words, they could not be shipowners. However, there is nothing to show that they did not have the right to engage in trade, paying the *naulum* for goods of theirs carried on a vessel that did not belong to them.

In recent years, P. Veyne, K. Hopkins, H. W. Pleket, J. Andreau, and J. Rougé,⁵ working from different sources, have all arrived at the conclusion that large sums of money deriving from the Roman elite served to finance trade, in particular maritime trade. The method adopted by Hopkins is the most original: with the aim of calculating the volume of foodstuffs required to keep Rome supplied, the number of ships needed to carry it, and the cost of building the vessels, he concludes:

The total capital value of ships involved in supplying the city of Rome alone probably equalled over 100 million HS, that is the minimum fortunes of 100 senators. The sums involved, especially in large ships, were so substantial that it was likely to have involved those Romans with substantial capital to invest and to put at risk. (Hopkins 1983: 102)

Rash and prone to inaccuracy as such computations may be, there is some chance that the total arrived at may give us a rough figure that we can work with. One well-known example, as early as the second century BC, of the elite's involvement in financing maritime trading is Cato the Elder's practice of *fenus nauticum* (maritime loans) in his last years. How far, though, can one generalize?

On the one hand, there are many texts that show that, as well as agriculture and on the same footing, moneylending with interest was a constant practice among the most respectable and wealthy people. Seneca says so three times, speaking of general examples (*Ep.* 2, 6; 41, 7; 87, 6); and he, too, did it (Tacitus, *Ann.* XIV. 53 *in fine*), as would Pliny the Younger in his time (*Ep.* III. 19). One could easily quote other references.⁶

On the other hand, I would like to draw attention to a text by Seneca that has a bearing on this subject (*Ep.* 119, 1). He is speaking of a commonplace of Stoic rhetoric: the best way to become rich is to reduce one's desires, since not desiring is tantamount to possessing. The text begins like this:

Docebo quomodo fieri dives celerrime possis... ad maximas te divitias compendiaria ducam. Opus erit tamen tibi creditore: ut negotiari possis, aes alienum facias oportet ('What I shall teach you is the ability to become rich as speedily as possible... I shall lead you by a short cut to the greatest riches. It will be necessary, however, for you to find a loan; in order to be able to do business you must contract a debt') (trans. R. Gummere).⁷

⁵ Veyne (1979a); Hopkins (1983); Pleket (1983); Andreau (1985b); Rougé (1985).

⁶ See Veyne (1961:, 239 [2001: 46, n. 54]) and Andreau (1978: 56), for the period of the Republic.

⁷ The French and Italian translations by H. Noblot (Collection des universités de France) and M. Giacchero (1980) go even farther, saying respectively 'any speculation requires calling up capital' and 'in order to trade, one needs to incur debts'. That Seneca's word *negotiari* means essentially, as it often did, maritime trade is made clear in the reply by the interlocutor (§5): *Circumspiciebam in quod me mare negotiaturus immitterem, quod publicum agitare, quas arcesserem merces* ('I was already looking about to see some stretches of water on which I might

A passage in John Chrysostom, recently quoted by Jean Rougé (1985: 173 n. 4), underscores this: the *emporos* who has suffered a shipwreck is not deterred; 'after having borrowed', he launches into new ventures. And I make no mention of the legal texts already referred to by Veyne (1979a: 279) and Rougé (1980).

Such references, clearly alluding to situations that were current and known to everybody, justify the conclusion that, in the Roman world, borrowing money so as to mount a seagoing trade enterprise was quite an ordinary occurrence.⁸

Many of the loans advanced by great landowners went to their peers—to finance their purchases of land, for example—to cities, or to clients, who rarely if ever repaid them. But, given that lending at interest was an everyday activity for great landowners and that borrowing was also normal among seagoing trade enterprises, it would be surprising if these two activities did not, at least from time to time, coincide. In addition to the instance of Cato, we know of precise examples of loans made by great personages that ended up financing commercial enterprises. They have been studied in particular by Jean Andreau:⁹ during the Republic, Cicero and Atticus were doing this via the intermediaries of Cluvius and Vestorius. Later, the Murecine tablets give evidence of emperors making loans via their slaves to traders.

Seneca's letter goes on to give some indications about how the loans were contracted, through an *intercessor*, who stood warranty for the borrower, and *proxenetae*, brokers whose function it was to bring together candidates for loans and the holders of capital.

This was presumably the arrangement that gave rise in certain cases not just to the dreams but to hopes for acquisition of wealth like those entertained by the unfortunate L. Licinius Nepos of Ostia. However, clearly, loans were not made to just anybody; and finding someone to stand warranty was not open to everyone. The hardest part was getting started. It was a commonplace to say, as do Seneca (*De brev. vitae*, 20, 2; *Ep.* 101, 2) and Plutarch (*Moralia*, 787a), that it is more difficult to get out of poverty than to become very rich; and there is nothing surprising in that. It is also likely, however, that such loans were much influenced by patronage and *amicitia*; any unsupported individual presumably stood little chance of getting a loan. There was, on the other hand, a bias in favour of freedmen. When Trimalchio retired from business, he lent to freedmen (at least if we abide, as we should, by the manuscript readings). In addition, because of the procedures governing loans, freedmen could enjoy

embark for purposes of trade, some state revenues that I might handle, and some merchandise that I might acquire').

⁸ On this, I am in agreement with H. Pavis d'Escurac (1977: 353), and J. D'Arms (1981: 104 ff.), both of whom quote the text by Seneca.

⁹ Andreau (1985b: 184 [1997, 85ff.]; cf. 1983: 12–13, 16 [1997: 99–118]).

much more independence than if they entered into associations with their patrons.¹⁰

My final point is this: these remarks enable us to clarify an important question. It is now certain that merchant shipping and trade were financed, at least in part, by money belonging to senators and the elite. What remains to be understood is how it was done: by loans with fixed rates, however high and risky they might be, as in the case of the *fenus nauticum*, or by direct involvement in enterprises, sharing their profits and their risks? Investing and lending are not quite synonymous. A lender does not form a company with a borrower; and scholars in this area are often confused. Rougé (1980: 293) warned about this misconception in his criticism of U. von Lübtow, who, in connection with Cato, spoke of 'a combination of a maritime loan and an association for long-distance seaborne commerce'. But it is a misconception that dies hard. One wonders why, for instance, in the same volume, E. Gabba (1980: 92), having properly stated that, for Cato, '*mercatura* was not pure and simple trade directly managed... but in his eyes was shipping loans organized by an enterprise run by someone else', then speaks of *compartecipazione*? Is it right to say that Trimalchio 'continues to dabble in occasional speculation, since he lends money at interest' (Veyne, 1979a: 277)? My own view would be that, as Narducci (1984: 244) says, in lending at interest, Trimalchio is actually leaving the world of speculation behind. Conversely, what meaning can be found in a sentence like this, from M. Christol (1982, 8): 'With his freedmen, he can now form associations; but at that point all financial responsibility disappears and the freedman acts as a screen'?

Lately, much scholarly energy has been expended in the search for instances where senators or great personages were involved, directly or via intermediaries, in seaborne commerce or in occasional commercial enterprises. Yet, very few concrete examples have been identified, none of which seems to me to be indubitable. This may be explained, as some say, by the fact that members of the elite preferred to say nothing about an activity seen as dishonourable. But, alongside this lack of examples, of debatable significance, there are signs that lending money to seaborne trade enterprises was indeed standard practice. Given the absence of other sources, we can only suppose that this was the channel through which the senatorial aristocracy's money contributed to the financing of such enterprises.¹¹ This helps explain why commercial transport reached the proportions evidenced by archaeology, without, however, implying that Roman aristocrats were motivated, even surreptitiously, by a business mentality. Licinius Nepos' inscription, expressing the regret that he had lived *laboriose et non secure*, hints at values different from those of traders, notably security, which members of the higher orders could not afford to ignore.

¹⁰ On independent freedmen, see Garnsey (1981).

¹¹ In support of this, see Andreau (1983: 16 [1997: 113]).

[The link I made between what Adeimantos heard a sailor say about the earnings of the owner of the *Isis* and the income of a procurator *trecenarius* is not enough for us to see this figure as reliable evidence. The matter of relations between ship operators and traders is still under discussion, having been reopened recently by Catherine Virlouvet and Michel Christol,¹² both of whom have observed that, of all the people identified on amphorae from Monte Testaccio whose social status is known from inscriptions on stone, *P. Olitius Apollonius* is the only shipowner alongside a sequence of *mercatores*, *negotiatores*, and *diffusores*. Virlouvet reminds us that the sum invested in the building of a ship was generally less than the cost of the cargo. The role of the trader thus presupposes a much greater financial base than that of the shipowner or charterer; and the importance of the world of ship operators should not be overstated. Christol sees two quite different stages in the career of *Olitius*, first when he was an owner, then, more profitably, when he became a trader. He thinks it unlikely that the man did both simultaneously.

Jean Rouge's statement (1980: 280) that 'it was utterly commonplace for a negotiator to own one or more ships, which put him in the category of the *domini navium*, the only difference being that they employed their own ships commercially' was based on a single source, a passage from Tacitus' *Annals* (XIII. 50–1) which says that Nero, having had to abandon his idea of abolishing all the *vectigalia* (indirect taxes) and thus becoming the benefactor of mankind, retained two or three of its intended measures, one of which was to exclude the value of ships in the provinces overseas from the assessment of a merchant's property.¹³ In fact, this reform would make sense only if many traders owned ships. We can, however, go into greater detail.

Some particular examples are supplied by texts, epigraphy, and underwater archaeology. In his *In Verrem* (2.v.154), Cicero announces that he will call as a witness *P. Granius*, a trader of *Puteoli*, robbed of his ship and his merchandise by *Verres*. Virlouvet cites two wrecks in which were found an anchor and some items from the cargo, all stamped with the same name, as evidence that the trader, or one of the traders, who owned the cargo was also the shipowner.¹⁴ In Rome, *L. Scribonius Ianuarius* was both a trader in wine and a shipowner in the Adriatic, a curator of that important corpus: a shipowning trader in a

¹² Virlouvet (2004); Christol (2008: 290–1).

¹³ *Ne censibus negotiatorum naves adscriberentur tributumque pro illis penderent*. The arguments used by Sirks (1991a: 69), then by Erdkamp (2005: 245), do not strike me as strong enough to transform these negotiatores into shipowners servicing the *annona*.

¹⁴ In the *Dramont A* wreck, dating from the middle of the first century BC and laden with Italian wine bound for Gaul, the name of *Sextus Arrius* appears on the anchor and on the stoppers of some of the amphorae (Hesnard and Gianfrotta 1989: 402, 411). The *Sud-Lavezzi 1* wreck was published by Liou and Domergue (1990): the lead ingots have a mark incised on the side (this is a trader's mark, the producer's name being moulded on top of the ingot) in the name of *Ap. Iunius Zethus*, a freedman probably of *C. Ap. Iunius Silanus*, a consul in AD 28, and the same name is engraved on an anchor (pp. 56–94).

dominant position.¹⁵ If I may allude to river traffic, the rich evidence from Lyons affords several examples of master boatmen on the Rhône or the Saône, or on both rivers (the shipowners of river traffic), who were also traders in muria, wine, oil (?), grain, and perfumes.¹⁶ C. Apronius Raptor, a ship's master on the Saône, a decurion at Trier, was the patron of the Lyons wine-traders: if he was not a wine-trader himself, which may not be certain, he was chosen by them because of his contacts in the trade and the influence he might be able to wield.¹⁷

There were three possibilities: shipowner; trader relying on ships owned by other people; or shipowning trader, carrying his own goods on his own ship and, when occasion arose, leasing space to other traders as well. Any of the three might well make common folk indulge in day-dreaming; but it seems they were most attracted by the third option, which was definitely the best. What is at issue is how common it was. An interesting document relevant to this point has recently become available: P. Bingen 77,¹⁸ dating from the second century AD, records the arrival of eleven ships at Alexandria, with the names of their owners, the ports they had sailed from (or their home ports?), the nature of their cargoes, and the names of the owners of the cargo indicated by the words 'carries on behalf of' (ἄγει followed by the dative). Two of the eleven ships arrived in ballast; on three of the other nine, the name of the owner of the cargo is replaced by the words 'for the owner'. A third of the ships detailed in this document were thus in the possession of shipowning traders.

The finest series of inscriptions mentioning guilds of shipowners is the one in the Piazzale delle Corporazioni in Ostia. Twelve cellae belong to shipowners, with the word *negotiantes* added on only three occasions. Of their home ports, seven are in Africa, two in Sardinia, and three not mentioned. Some of these shipowners can be found, described as *domini navium*, in inscriptions on stone from Ostia, every one of them hailing from the same two regions, Sardinia and Africa.¹⁹ Their main cargo was certainly grain; and a great many of their voyages must have been devoted to the transporting of tax grain from those annony provinces. From this point of view, the cellae in the Piazzale delle Corporazioni can be seen as agencies for carriers seeking return cargoes; and it is understandable that shipowners should be more visible here than elsewhere.]

¹⁵ ILS 7277 (113 1, 9682).

¹⁶ ILS 7028 (CIL XIII, 1966); ILS 7030 (CIL XIII, 1954); ILS 7031 (CIL XIII, 1966); CIL XIII, 1972; cf. Tran (2006: 103–4).

¹⁷ ILS 7033 (CIL XIII, 1911); 'active in *euergetism* towards the prestigious negotiatores *vinarii*, Raptor was a personage of some eminence on the local scale' (Tran 2006: 278).

¹⁸ Heilporn (2000).

¹⁹ ILS 339 (CIL XIV, 99): *Domini navium Carthaginiensium ex Africa*; ILS 6140 (CIL XIV, 4142): *Domini navium Afrarum universarum, item Sardorum (sic)*.

The Sale of Wine

In this chapter, I wish briefly to outline a study of the means by which, during the Roman Empire, wine produced on an estate ended up on consumers' tables or in their cellars. The evidence available lends itself to seeing the question from two points of view, the producer's and the consumer's.¹

THE POINT OF VIEW OF THE PRODUCER

The choice facing an Egyptian producer in the second century AD can be seen from an Oxyrhynchus papyrus (*P. Oxy.* LIX. 3989).² An ex-gymnasiarch from Oxyrhynchus, sending instructions to someone who is looking after his estates, adds this at the end: 'You did well to sell the wine to traders rather than retail it in small amounts' (καλῶς ἐποίησας τὸν οἶνον ἐμπορικῶς πωλήσας καὶ μὴ κοτυλίσας).

It should be noted that the only choices appear to have been selling wine by the *cotyla* (a quarter of a litre)—that is to say, retailing in very small quantities, as in a bar—and selling to a trader. I have no evidence suggesting that a producer might sell two or three amphorae directly to a consumer who wanted to buy some at the cellar door.

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¹ Similar arguments have been presented recently, not limited to wine, by L. de Ligt (1993: 164-5), and J.-J. Aubert (1994: 244-76). N. Morley (2000: 213 ff.) also touched on this subject at the same conference. The bulk of the evidence about wine traders was gathered by Schüster (1958) and Schlippschuh (1974).

² I am very grateful to Fabienne Burkhalter for drawing my attention to this papyrus.

Κοτυλίζειν

The term *κοτυλίσας* can be explained, at least in part, by the advice of Varro, *Rust.* I. 2, 23:

si ager secundum viam et opportunus viatoribus locus, aedificandae tabernae deversoriae, quae tamen, quamvis sint fructuosae, nihilo magis sunt agri culturae partes ('If a farm lies along a road and the site is convenient for travellers, an inn might be built; however profitable it might be, still it would form no part of agriculture'). (trans. W. Hooper, rev. H. B. Ash, adapted)

What he is describing are the activities of both hotelier and innkeeper. We can see some evidence of this in the *tabernae Caediciae* spoken of by Festus,³ who indicates that they are on the edge of the Appian Way and that they bear the names of their owner. They have long been associated with the *Vicus Caedicii*, which, according to Pliny (XIV. 62), was in the middle of the *Ager Falernus*. The Oxyrhynchus wine-grower could have sold his wine by the *cotyla* in such places.

Raymond Billiard (1913: 183), drawing on Breton's book (1855) on Pompeii, which mentions an *oenopolium* in the House of Pansa, speaks of this as 'an essential annex to the owner's vineyards', where 'a *dispensator*, a slave whose special job this was, retailed fruit, vegetables, and wine from his master's estates to local housewives'. Billiard compares this activity with the way wine was sold by Florentine nobles in the nineteenth century, 'poured by the jugful in a little room on the ground floor of their magnificent palaces'. He gives no other examples of any direct contact between producers and consumers. It was from this passage that Roger Dion, in a fine example of circularity, drew his conclusion that we can find 'in Greco-Roman Antiquity the origin of the custom which was constant in France until the reign of Louis XV', selling at the half-door and by the jugful, and which 'the greatest nobles engaged in with neither scruple nor shame', though it did not amount to 'being an innkeeper'.⁴

The truth is that the shops surrounding the fine House of Pansa, as it is called, were rented out, at least in AD 79.⁵ There is nothing to show that they were ever used for selling the landlord's wine; and A. Wallace-Hadrill (1994), who has recently analysed the cheek-by-jowl siting of *tabernae* and aristocratic houses, never goes that far. This can remain an open question, in the light of Vitruvius (VI. 5, 2): *Qui autem fructibus rusticis serviunt, in eorum vestibulis stabula, tabernae...sunt facienda* ('But those who depend upon country produce must have stalls for cattle and *tabernae* in the forecourt...') (trans. F. Granger, adapted). The type of houses of which it could be said that they

³ Lindsay, 39.

⁴ Dion (1959), quoting Legrand d'Aussy (1782).

⁵ *CIL* IV. 138.

fructibus rusticis serviunt remains unclear—though it probably does not include the House of the Faun in Pompeii, despite its *tabernae* opening onto the street and communicating with the atrium.⁶

Ἐμπορικῶς

Evidence on the various ways of getting the vintage from the grower to the trader is much more abundant. We can define three of them.

1. The producer makes and looks after his wine; the trader comes to the cellar door to make the purchase and take delivery after the *vinalia* in April or later. In the laws governing wine, with their rules about tasting, measures, and responsibility during the keeping period, there is no shortage of instances of this; and the jurists⁷ see this procedure as the most widespread method of sale. Buyers took the wine away in skins (Cato, 154) or amphorae. If the amphorae were Dressel 1s, much evidence demonstrates that the pozzolana stoppers bore the names of traders, who brought their stamps with them on their boats;⁸ and, while on board, they even fashioned cork stoppers to be overlaid by the pozzolana.⁹ It was these traders who then set about decanting the wine into amphorae.

An example that, though different, still seems to confirm this can be seen in the building in Oplontis that has been called the villa of Crassius Tertius or Oplontis B. It is a great courtyard with a portico, 22.5 metres × 10 metres, with a series of numbered *cellae* opening onto it—in short a *horreum*. In the *cellae*, remains of agricultural products have been found, clover, hay, lucerne, and, in one of them, 7m³ of pomegranates. At four points in the courtyard itself piles of empty amphorae have been found, more than 600 in all, with two ovens for melting pitch. Among the amphorae, there are not only local varieties but Greek ones as well, from the *Ager Falernus* or Surrentum, and even one that had previously been reused to carry *liquamen*. On the white coating of the portico wall, there is a red inscription: *N.NEGOT*, which must be some sort of allusion either to a *negot[iator]* or to *negot[iatores]*. The whole impression is one of premises let out to traders as space for storage and work, where *vinarii*, among others, had reusable amphorae pitched for the next vintage. They were a category of relatively modest traders, who needed no great number of new

⁶ [Nowadays, I would be less cautious; see p. 15.]

⁷ Yaron (1959); Frier (1983: 258).

⁸ Stamps have been retrieved from the wreck at Cape Negret (Ibiza) and from the Gulf of Fos; see Hesnard and Gianfrotta (1989).

⁹ Joncheray (1994: 18). This wreck has yielded up some cork stoppers completely shaped, others barely started, and intact sheets of cork.

amphorae and were presumably active in regional distribution of the produce from some of the villas in the Pompeii area.¹⁰

The wine-grower himself could also undertake the decanting into amphorae and the sale of wine in these containers: there are plenty of examples of workshops attached to villas; and the *Digest* (XVIII. 6, 1, 1) makes quite clear that there were two possibilities, selling in bulk or in amphorae: *Et ante mensuram periculo liberatur si non ad mensuram vendidit sed forte amphoras vel etiam singula dolia* ('And even before it is measured, [the vendor] will be released from responsibility if he did not happen to sell it by measure, but sold it in amphorae or by *dolia*') (trans. S. P. Scott, adapted).

2. The producer sells the standing crop. Three texts outlining this method are traditionally quoted: the *leges* of Cato (147–8), distinguishing the *lex vini pendentis* from the *lex vino in doliis*; the mention by Pliny of the sale of heaps of grapes from the vineyard of Remmius Palaemon: *emptori addicta pendente vindemia* (XIV. 50); and Pliny's letter on the *remissiones* (VIII. 2).

With the third of these sources, there are two difficulties, identified in an influential article by De Neeve (1990) on the estates of Pliny the Younger: on the one hand, at IX. 16 and 20, Pliny is dealing with his vintage, whereas it is generally accepted that this was undertaken by whoever had bought the crop *pendente vindemia*; and, on the other, he has sold to several traders, and one wonders how they went about dividing the tasks and making use of the villa's equipment. De Neeve's solution is a complicated one and has not met with much agreement. In my view, there is a simpler solution: Pliny's words are *vendideram vindemias certatim negotiatoribus ementibus*. Nowhere in the letter does it say the crop was sold standing, despite which that is unanimously accepted to be the case, especially since Heitland's statement three-quarters of a century ago that Pliny had sold 'evidently the hanging crop'.¹¹ Editors in the nineteenth century were less rash, both G. E. Gierig in 1800 and M. Döring in 1843 harbouring the same doubts as I do.

Somebody who buys a standing crop is wagering on two things, the first of which is the future price of the wine. This, however, is almost negligible compared with the other risk: the quantity and quality of the vintage, which will remain fraught with uncertainty until the wine is made.¹² There are other letters by Pliny that give evidence of how momentous this uncertainty could be.¹³ Yet, in VIII. 2, Pliny is referring only to the price: *invitabat pretium, et*

¹⁰ See Lagi De Caro (1985: 552–4). I also draw, with much gratitude, on a seminar presented in Marseilles (December 1992) by Dr Lagi De Caro.

¹¹ Heitland (1921: 322). The idea made its first appearance in the Venice edition of 1519 by G. M. Cattaneo.

¹² Billiard (1913: 183) is mistaken in saying that the texts by Cato do not refer to a bulk sale and that the final transaction depends on the later calculation of the amount of wine. For evidence against that, see *Dig.* XVIII. 1, 8, and 39.

¹³ IX. 16, 1; 20, 2; 28, 2.

quod tunc, et quod fore videbatur. Had he sold the standing crop, he would undoubtedly have mentioned the second of the two wagers. The truth is that Pliny auctioned off his new wine, in batches, which means that traders sampled it, then made offers as to price and quantity; some of them have paid, some have not paid, and no one has yet taken delivery. Reading this meaning from *vindemias* is entirely plausible: Vergil, for instance, uses it to refer to must: *spumat plenis vindemia labris* ('the vintage foams in the brimming vats') (*Georg.*, II. 6, trans. H. R. Fairclough).¹⁴ So this letter by Pliny should be used instead as evidence for the first of the three ways mentioned above. Sales of standing crops are still well attested by the other two sources quoted.

As for how such sales were managed, a trader would buy the grapes still on the vines at some time before harvesting began. He was then responsible, either personally or through a sub-contractor, for doing the vintaging, though he used the equipment on the estate (treading vat, press, and *lacus*). Two different possibilities are attested for what might happen next: in Cato, the wine was made on the estate and remained in store until being removed (at the latest by the Kalends of October, in other words, the following harvest); while *Digest*, XIX. 1, 25, implies that, after treading, the must was taken away to ferment elsewhere.¹⁵ This second source is an interesting one, for it presupposes that there were wine-making premises and storehouses belonging to traders, unattached to the vineyards and the pressing establishments, and hence that there were autonomous trading growers who had at their disposal solid infrastructure.

We get a reasonably similar picture from *Digest*, XVIII. 6, 2. At XVIII. 6, 1, 4, there is a mention of the problem of a sale of wine in the *dolia* for which no date has been set for it to be taken away. In that case, the wine must be removed before the wine-grower needs his *dolia* again for the next vintage. If not, recourse might be had to the famous and tragic measurement by basket, which meant pouring the wine away. This is the eventuality mentioned by Cato. In the following paragraph, however, a clarification by Gaius is mentioned:

Hoc ita verum est si is est venditor cui sine nova vindemia non sunt ista vasa necessaria; si vero mercator est, qui emere vina et vendere solet, is dies spectandus est quo ex commodo venditoris tolli possint. (The above is also true provided that the vendor is someone who needs these vessels only for the new vintage. But if he is a merchant who is in the habit of purchasing and selling wine, he must watch for the moment when the wine can conveniently be removed without inconveniencing the seller.) (trans. S. P. Scott, adapted)

¹⁴ See also the text by Seneca quoted at the end of this chapter. As for the use of the plural, it is constant in Pliny, who never uses *vindemia* in the singular.

¹⁵ *Qui pendentem vindemiam emit...sive lectam uvam calcare sive mustum evehere prohibeatur...*

Here we have a trader who bought wine in bulk, always sold it on in bulk, presumably to other traders or to retailers; so, if he was to buy new wines and conduct other transactions, he needed his *dolia*. However, he did not sell retail, but rather sold to someone who bought in a single batch the wine contained in several *dolia*, if not the whole lot. This gives a slightly different image of a trader from that of the buyer of a standing crop, who was a mere go-between, though he too owned heavy equipment and was very different from the small retailer and even from those in the *horreum* belonging to *Crassius Tertius* at Pompeii.¹⁶

It would be nice if archaeology had turned up examples of these independent storage cellars. Rosa Plana-Mallart and Michel Christol have argued that one good example of this is the major workshop producing amphorae and tiles at Llafranc (Catalonia): three ovens, an area for drying tiles, and a dumping ground for amphorae have been identified. A name stamped on amphorae and tiles, *P. Vsulenus Veiento*, is no doubt that of a member of a great family of Narbo, who, if we are to accept the authors' reading of the inscription *CIL* XII. 4426, was more particularly the father of a *duumvir* and *flamen* belonging to the last years of the reign of Augustus. Near the pottery workshop stood a building in which were found the base of a *dolium in situ* and many fragments of other *dolia*.¹⁷ The sites being excavated would appear to be the urban area of a small port. The authors are adamant that Usulenus Veiento was a trader. And, in that case, he could easily have been a buyer of standing crops of wine in the local area (where small properties seem to have played a leading part), who aged the wine in his cellar near the harbour, and a maker of the amphorae in which he exported the wine he produced. We could possibly see a similar function in the building excavated at number 16, boulevard de la République in Aix-en-Provence: a large shed much longer than broad (more than 41 metres $\times$ 9.5), which held *dolia*, up against the city walls. No wine-pressing facility has been discovered.¹⁸

However, these hypotheses are nowhere near proven, and it may well be that these discoveries belong to quite standard production facilities. The hypothesis that there was a large villa at Llafranc has been advanced; and the existence there of an urban settlement has not been established.¹⁹ Nor does

¹⁶ [Pliny gives further evidence of cellars for wine storing and ageing belonging to traders (XXIII. 40); these were the traders who invented smoke-ageing in their cellars: *mangones ita in apothecis excogitavere*].

¹⁷ Christol and Plana-Mallart (1997, 1998).

¹⁸ Nibodeau, Nin, and Richarté (1989).

¹⁹ Llinas i Pol and Sagerra i Aradilla (1993: 106): 'The dimensions of the site would appear to rule out a villa, unless what we have here is one of great proportions, along with many outhouses... The layout of any urban settlement is completely uncertain and there is no evidence of streets or notable buildings.' Even Christol and R. Plana-Mallart (1998) hint that they cannot rule out production, when they mention 'structures from the first century AD with producing and storing functions'.

it seem impossible that Usulenus Veiento was merely the owner of a large pottery workshop. It would not have been out of the question to have a vineyard in Aix near the ramparts; and it appears plausible that the storehouse had an agricultural function, especially since the authors say it was no doubt transformed at some later stage into a cowshed. The area of these two excavations was not extensive enough to rule out the existence of a wine press near the storehouses, neither of which was completely unearthed. So we must wait for a reliable archaeological model of such buildings, which are known to have existed but whose distribution remains uncertain.

3. This third category is that of the producers who undertake the transport of their own wine from the estate. Their existence is indisputably attested in texts from the *Digest* that list equipment that is useful for *deportare*, *exportare*, *evehere*, or *vectare* agricultural produce: amphorae, casks, skins, draught animals, carts, and boats.²⁰ Varro (I. 16) makes the point that the estate needs to be established in an area *quo fructus nostros exportare expediat*,²¹ and Columella (I, 2, 3) stresses the importance of having waterways close by, *quo deportari fructus et per quod merces invehi possint* (cf. Cato I, 3).

These two texts show consistency in the vocabulary they use: nowhere is there a suggestion of sales, but only of conveyance. It could be argued that what they are dealing with is supplying the landowner's town house, which was most definitely done,²² and very probably they are talking about part of the transport that this entailed. Let us not read too much into that last comment, though, for clearly Varro at least means selling in the nearby town. Perhaps this is again evidence of contact with the consumer (possibly in the context of *nundinae*), whether in a mode akin to that of the *κοτυλιζειν* (wholesaling in small quantities), or even selling in larger amounts, in amphorae, for example (though there is no evidence for this). It may also refer to selling to *mercatores* or to local *caupones*. It is difficult to say whether producers went looking for buyers much farther afield (boats, on rivers as on the sea coast, were useful even over short distances), and, if so, who were

²⁰ *Dig.* XXXIII. 7, 12, 1 and perhaps XLVII. 2, 21, 5. Also Cicero (*Verr.* 2.v.46). To my mind, *Dig.* XIV. 3, 4 makes it appear far from certain that the goods conveyed by *institores ad homines honestos* are agricultural products, the meaning of the passage being actually ambiguous; see Aubert (1994: 7, n. 26). On this problem, see Di Porto (1984b: esp. 3238–41); de Ligt (1993: 164–5). I need not stress my own preference for much less assertive language than Di Porto uses; his article suffers from its reliance on an outmoded interpretation of the stamps of *Sestius* and *L. Titius* on the amphorae and stoppers of amphorae from the Grand Congloué wreck.

²¹ The text of Varro I, 2, 14 (*vilicus... appellatus a villa, quod ab eo in eam convehuntur fructus et evehuntur, cum veneunt*) is more ambiguous: the symmetry between bringing (*convehere*) the crops to the villa and carrying them out (*evehere*) at the time of sale may be taken to mean merely that they were being brought out of the storehouses or at the most taken outside the gates of the estate.

²² Whittaker (1985: 58–9). Serving wine of one's own making is an elegant touch: Fronto, *Ep. de eloquentia*, I. 1 (Naber, 115) and see Veyne (1979a).

the buyers. Here we start floundering among a multiplicity of hypotheses, which it would be pointless to develop further.²³

By way of conclusion, let me underline the diversity of the possibilities that I have canvassed. In the light of these, it would still, as usual, be useful to know what was the dominant paradigm and what was less frequent; and, also as usual, the sources we have do not run to that. Which model is held to be standard is influenced by personal impressions. My own impression is that the screen that trading interposed between producers and consumers was pretty solid and pretty diverse, and that the producing activity was as a rule quite separate from any level of trade that went beyond local sales. Wine arriving at Ostia, I feel, was generally conveyed there by members of the *corpus importantium et negotiantium vinariorum*²⁴ or even, if it had come from the east coast, by the *navicularii maris Hadriatici* of Ostia and Rome,²⁵ or in the third century by the *negotiantes vini supernates et Ariminenses* of Rome,²⁶ and not by producers who owned ships and made amphorae. However, there are gaps of uncertainty, breaches through which any scholars convinced that great Italian landowners were directly involved in trading their own agricultural produce may step at their ease. Bruce Frier comments that 'none of the jurists' hypothetical cases concerns sale to ultimate consumers',²⁷ to which one could reply that the *Digest* explicitly quotes a mere three instances of wine being bought by a *mercator* or a *negotiator*,²⁸ at other places, it speaks only of *emptor*. In such matters, it is not easy to prove anything. The case of Remmius Palaemon, however, who owned *officinae promercialium vestium*,²⁹ who increased spectacularly the productivity of his estate, showing he had a knack for investing and a concern for profit-making, and then was content to sell his wine as a standing crop, strikes me as a rather eloquent example of a well-internalized and all but insurmountable disjunction between agricultural production and the business of being a trader.

THE POINT OF VIEW OF THE BUYER

All anybody looking for wine had to do was go to the nearest *taberna*, of which there were many. People could drink on the premises but they could also surely buy a jugful and take it home (if, that is, they were in the habit of drinking at home). There was common wine in bulk; wine *de cupa*, which a

²³ [This matter is taken up in a more clear-cut way on pp. 13–15.]

²⁴ Bloch (1953). For some *importatores negotiantes*, Bloch (1939).

²⁵ *CIL* XIV. 409 = *ILS* 6146; *CIL* VI. 9682 = *ILS* 7277. ²⁶ *CIL* VI. 1101 = *ILS* 519.

²⁷ Frier (1983). ²⁸ *Dig.* XVIII. 1, 71 et 6, 2; XIX. 1, 21.

²⁹ Suetonius, *Gramm.* XXIII. See Kolendo (1985).

man of the status of Piso should definitely not drink,³⁰ and which the innkeeper sometimes tried to water down.³¹ But it appears that there was better wine too: in Pompeii, Edon's wine shop served three wines: common; slightly better; and Falernian;³² and, on the wall of the *caupona* VI, 10, 19-1, there is a graffito (but is it ironic?) saying *adde calicem Setinum* (Setia wine was one of the best of the period). In Pompeii, it seems that Falernian and *Setinum* could be had by the glass, in a bar: this has its significance, for nowadays, if you want to savour a great wine at a bar, you have to visit a specialized wine bar. In Rome, too, at the time of Marius, the slave of M. Antonius' lowly friend could get from his usual *kapelos* an expensive and good-quality wine that was different from the young plebeian wine that his master was in the habit of drinking, a fact that will bring misfortune on their host.³³ The slave samples the wines, which means they were sold in bulk. In a word, good-quality wine was sold by the *cotyla*.

Was it possible to buy wine in amphorae in these *tabernae*? In the House of Neptune and Amphitrite at Herculaneum, there is a *taberna* that opens into the house itself and is better appointed and better preserved than the others. Behind the usual counter, a mezzanine floor and some specialized shelving were installed for amphorae, which, according to Maiuri (1958: 402-3), *venivano svuotate o smerciate nella bottega* ('They were emptied or sold in the shop'). The second of those possibilities strikes me as the more apt, given that wine sold by the *cotyla* or over the counter had to be kept in bulk.

In Rome, various levels of *vinarii* are differentiated in inscriptions. The *vinarius* in the Velabrum, the *vinariarius* from the camp of the Praetorian cohorts, and even the *negotiator penoris et vinorum* of the Velabrum *a IIII scaris* must have been retailers. On the other hand, A. Herennuleius Cestus, *negotiator vinarius a septem Caesaribus, idem mercator omnis generis mercium transmarinarum* was a licitor (just as the trader in oil from Baetica, L. Marius Phoebus, was a *viator tribunicius*); he was a personage who conducted a more substantial trading operation. The same goes for the *negotiantes* united in a guild who lease to the emperor the *cellae vinariae Novae et Arruntianae*. Ti. Claudius Docimus, *negotians salsamentarius et vinariarius maurarius*, must have imported and sold amphorae from Mauritania Caesariensis.³⁴ It is possible that private individuals could have bought from this level of traders; they could also conduct their transactions in the *fora vinaria* at Rome and Ostia.³⁵ This level, which could deal with the retailer as well as with the

³⁰ Cicero, *Pis.* 67.

³¹ *CIL* IV. 3948: *tu vendes ac(u)am et bibes ipse merum.*

³² *CIL* IV. 1679.

³³ Plutarch, *Mar.* XLIV. 2. See also Claudius' curious remark about the wine shops where he was once in the habit of buying wine by himself: Suetonius, *Cl.* XL.

³⁴ The inscriptions quoted are to be found in *ILS* 7484-7; on the *Cellae Novae et Arruntianae*, see Marina Bertinetti's survey in Bussi and Vandelli (1985: 159-60).

³⁵ On which see Coarelli (1996a).

consumer, is no doubt evidenced also by the discovery at Olbia, near Hyères, of a building of about 250m², with a colonnade down the middle, which burned down in the middle of the first century AD. On a floor, a great many sherds of amphorae were found. It was presumably a warehouse distributing in Olbia wine in amphorae from both the local area and farther afield.³⁶

Do these remarks suffice to explain the acquisition of the wines that filled the private storehouses: *veteraria nostra et plena multorum saeculorum vinde-miis horrea*?³⁷ It may be supposed that, in stocking these great aristocratic cellars, trade was not the only factor that counted.³⁸

³⁶ Bats (1989). [The building was published in greater detail by Pierre Excoffon, in Bats (2006: 136–54). Rebuilt about AD 30, it included a shop, behind which was a huge warehouse. As well as one dolium, a great many fragments of amphorae were found, representing at least 236 individual items and at the most 485. Almost all of these were wine amphorae, the vast majority of which (424 of 485) were made in Gallia Narbonensis. There were twenty-eight Italian amphorae and four eastern ones. This was no doubt a substantial retail outlet, with its warehoused stock. To the south, at the very end of the insula, was the trader's house.]

³⁷ Seneca, *Ep.* 114, 26.

³⁸ On the Greek period, an article to read is Salviat (2013: 49–51, 55–6 (1986b: 181–2)): long before me, it broached similar questions and arrived at conclusions close to my own.

The *plebiscitum* Claudianum

The *plebiscitum Claudianum*, dating from 219–218 BC, which forbade senators and their families to own seagoing vessels with a capacity greater than 300 amphorae,¹ has been the subject of numerous discussions and much varied interpretation.² For a long time, it was accepted that the effect of the measure had been to bar senators from engaging in trade and even from seeking, as Claude Nicolet has said, any form of *quaestus*, ‘that is to say, any seeking after profit, in particular through economic channels’.³ Scholars have wondered about what principles or interests motivated the tribune of the plebs, Q. Claudius, and Flaminius, the sole senator to support him, who thus brought upon himself the hatred of his colleagues. There being no evidence that could

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¹ Livy, XXI. 63, 3–4: [Flaminius] *inuisus etiam patribus ob nouam legem quam Q. Claudius tribunus plebis aduersus senatum atque uno patrum adiuuante C. Flaminius tulerat, ne quis senator cuius senator pater fuisset maritimam nauem, quae plus quam trecentarum amphorarum esset, haberet. Id satis habitum ad fructus ex agris uectandos; quaestus omnis patribus indecorus uisus. Res per summam contionem acta inuidiam apud nobilitatem suasori legis Flamini, fauorem apud plebem alterumque inde consulatum peperit* ([Flaminius] was an object of hatred to the senators on account of the new law (which ran against the interests of the senate), which Q. Claudius, the tribune of the plebs, had proposed. Alone of the senators, C. Flaminius had voted in favour of it. The law stated that no senator or anyone whose father was a senator could own a vessel which had a tonnage of more than 300 amphorae. That capacity was considered to be sufficient for transporting one’s produce from the estate; every form of profit was thought to be beneath the dignity of senators. The measure, which was passed after bitter debate, earned Flaminius, who had supported the law, the hostility of the senate and the favour of the plebs and, consequently, a second consulship’ (trans. B. O. Foster, adapted).

The precise meaning of *quaestus* (profit) will be elucidated in this article. The words *aduersus senatum* (literally ‘against the senate’, and translated here as ‘which ran against the interests of the senate’) may give us pause, as they did to Weissenborn and Müller: should we read them as meaning merely ‘in opposition to the interests of the senate’ or do they imply also ‘going against the authority of the senate’? I lean towards the second of these meanings, as it is spelled out by the words following: opposition to the measure had been a single vote short of unanimity. Cf. Càssola (1962: 243).

² I rehearse here only the most recent. A survey of the earlier debates is in Càssola (1962: 216–17).

³ Nicolet (2000: 27–8 (1980: 879)).

afford an informed answer to this question, all sorts of opinions have been expressed. According to some scholars, the intention was to have senators revert to the *mos maiorum*.⁴ Yavetz takes the view that Flaminius was trying to ingratiate himself with members of the equestrian order by reserving to them the opportunity to grow wealthy through business. Càssola, on the other hand, thinks that, by making it impossible for financiers to be elected to the Senate, he was expressing hostility to them.⁵ Gabba argues that the intention was to protect senators from the risks entailed in large-scale seaborne trade. Guido Clemente contends, as did Mommsen, that the law must have been a response to problems that arose when commercial activity was linked to administration of the provinces and the signing of contracts; and Fausto Zevi's view is, more exactly, that it was a way of preventing senators from having anything to do with the transporting of tax grain.⁶ I shall argue in favour of this hypothesis, with the intention of complementing it and seeing it in a broader context.

Since 1975, scholars, in particular Israël Shatzman, Emilio Gabba, and Guido Clemente, have rightly doubted the validity of the notion that the restrictions of the *plebiscitum Claudianum* amounted to a ban on senators' engaging in trade.⁷ The fact is that no one needed to be a shipowner to engage in trade; and not all traders, even those who were active in seaborne trade, owned ships. It had always been standard practice to pay for space on someone else's ship or to charter a whole ship. There are abundant examples of this in Antiquity; and underwater archaeologists have, of course, discovered wrecks that were carrying goods consigned by various different traders. No law ever prevented anyone from signing contracts *mercium uehendarum*, for carrying goods for sale or utilizing space on vessels belonging to other people.

Scholars who have taken the law to be a prohibition on engaging in trade, or, more broadly, in business enterprises, have obviously interpreted it in the light of the two linked grounds mentioned by Livy immediately after: *Id satis habitum ad fructus ex agris uectandos; quaestus omnis patribus indecorus uisus*. Livy's text consists, in fact, of a first sentence, quoting the legal injunction, then of two sentences in direct speech by Livy himself. I would define these as serving the purpose of a preamble to the statute, giving the grounds on which it is based. It is conceivable (though it has been disputed; I shall come back to this point) that Livy's two sentences derive from knowledge he may have had of Flaminius' *suasio* or the *contio* of the *rogator* Q. Claudius.

My procedure will be to begin by examining separately the content of the law and the content of the preamble. It is very often the case that the preamble to a statute refers to principles that it may not be intended to embody wholly in the law itself; and there may be no allusion to the more concrete topical

⁴ Nicolet (2000: 3 (1980: 882)).

⁵ Yavetz (1962); Càssola (1962: 217–18).

⁶ Gabba (1988 (1981)); Clemente (1983); Zevi (1994).

⁷ Shatzman (1975: 100); Gabba (1988: 32 (1981: 556)); Clemente (1983: 255).

reasons for its adoption. It is, moreover, these reasons that scholars have been trying to discover behind the 218 BC text.

THE PROHIBITION ON OWNING SEAGOING VESSELS WITH A CAPACITY GREATER THAN 300 AMPHORAE

If the limit set on the tonnage of the ships they might own was not enough to bar senators from engaging in commercial enterprises, what precise consequences might it have had for their activities? The answer to this question depends on two things: the general scope for other uses that owning a ship might afford; and the more particular scope that might or might not be afforded, in the third century BC, by owning a ship with a carrying capacity of 300 amphorae.

There were three uses to which a shipowner (*dominus nauis*) might put his vessel. He could keep it for his own use, to convey goods belonging to him, which he had either produced or bought. Or he could operate it in one or other of two main ways. Either he could retain commercial operation of the vessel and lease space on it to traders who needed to transport merchandise (*merces, naulum*), or he could hire it out for a time, or even permanently, to a third party who took on full commercial operation of it and was the *exercitor nauis*. All profits from operation of the vessel would accrue to this *exercitor nauis*, which Gaius saw as the essence of the *quaestus nauis*.⁸ I use the term 'ship operators' for such men, unless it is a case of someone transporting his own produce.

The volume of operations of a ship depended, of course, on its tonnage. What was meant exactly by a ship with a capacity of 300 amphorae? In a fundamental article published in the 1960s, Wallinga added this text of Livy's to many other sources, which enabled him to prove that tonnage given in amphorae is not using the word *amphora* as a measure of capacity (the *quadrantal* of about twenty-six litres) but referring to the number of actual containers.⁹ In 218 BC, such amphorae could only be of the 'Greco-Italic' variety, wine amphorae familiar to scholars from their presence in several wrecks. The most quoted example, which Wallinga discusses at length, is the amphorae from the Grand Congloué 1 wreck that foundered off Marseilles in the early years of the second century BC. Their capacity was close to the *quadrantal*; and empty they weighed between 10 and 13 kilograms.¹⁰ Let us assume that a full amphora weighed on average 38 kilograms. This would mean that the maximum dead weight allowable under the *plebiscitum Claudianum* was just under 11.5 tons. But the Greco-Italic amphora, shaped like a

⁸ Gaius, *Inst.* V. 71: *Exercitor nauis is est ad quem quotidianus quaestus nauis peruenit*. On this see Aubert (1999), with the bibliography.

⁹ Wallinga (1964).

¹⁰ Benoit (1961: 165, n. 3).

top, took up much more space than would be the case with the Dressel 1s, which date from the first century BC. According to Wallinga's calculations, the space occupied by each of the Grand Congloué amphorae was 115 litres. The 300 amphorae specified in the *plebiscitum Claudianum* thus amount to a ship of 24 shipping tons of 1.44m³.¹¹

A ship of such size was not a large one; but it was quite capable of taking to the high seas and, if necessary, crossing the Mediterranean. The wrecks excavated by Javier Nieto in the cove of Cala Culip at Cap de Creus, evidence of redistributive trade and coastal navigation over a distance of 80 nautical miles between Narbo and Ampurias in the first century AD, carried loads of no more than 8 tons.¹² The Cavalière wreck, which sank in the early first century BC not far from the Var coast (south of France), had been built in southern Italy and had plied to Africa, and carried barely 28 shipping tons.¹³ A recently published papyrus lists ships arriving at Alexandria in the second century AD, the smallest of which had a capacity of 1,000 artabas—that is to say, between 20 and 28 shipping tons (depending on what equivalence one uses to convert the artaba).¹⁴ In Marseilles, in the eighteenth century, the trading vessels known as tartanes carried between 30 and 60 shipping tons; and a few boats of a mere 15 shipping tons, along with others that were much larger, even sailed 'in convoy', in other words, to the Turkish coast, being integral to the inshore trading of the Ottoman Empire.¹⁵ A ship with a capacity of 300 amphorae was small but not necessarily unsuited to trading; it was at the lower limit.

There are huge differences in tonnage from one period to another and depending on which trade was being carried on. So they have to be seen in their own context. The second half of the third century BC was when wine from central Italy was first exported by sea. The oldest wreck laden with such amphorae, lying near the island of Monte-Cristo, may date from about 250 BC. After that, there are four wrecks that appear to date from 240–220 BC, two of which were carrying mixed cargoes and were probably restricted to local transit in southern Gaul or the area of the Balearics and Catalonia; only two of them, located in Tuscany and Catalonia, were carrying nothing but Italian amphorae. Finally, there are five wrecks dating from the last quarter of the century, three of them in Corsica, one in Sicily, and one in Gaul (off the island of Porquerolles).¹⁶ Unfortunately, none of the wrecks laden only with Italian amphorae has been

¹¹ The system of stacking layers of Dressel 1s saved considerable space, which must have decreased the tonnage calculated. Any space saved with the Greco-Italic amphorae of the third century BC was negligible. Besides, 300 amphorae could be loaded in at most two layers, so that space was saved only with half of the cargo.

¹² Nieto Prieto et al. (1989); Carreras Monfort et al. (2003).

¹³ Charlin, Gassend, and Lequément (1978) (the parallel with the *lex Claudia* is made by the authors, pp. 88–9); Guibal and Pomey (2003: 38).

¹⁴ Heilporn (2000).

¹⁵ Buti (2005: 13); Cabantous, Lespagnol, and Perron (2005: 267).

¹⁶ Cibecchini and Principal (2002).

properly excavated; nor are accurate dimensions available for them. Nevertheless, it is certain that none of them carried the thousands of amphorae to be found in later periods, in the days of the great wine transports in the late second and the first centuries. The oldest wreck for which we have a rough capacity estimate is the Grand Congloué 1, which seems to have been carrying at least 450 amphorae and 7,000 black-glazed dishes.¹⁷ In the middle of the second century BC, the La Chrétienne C wreck, one of those discovered earliest, is thought to have been carrying 500 amphorae. Such examples put us not far from the figure mentioned in the *plebiscitum Claudianum*.

In Plautus' *Mercator*, Charinus tells how his father, Demiphon, became a rich man: after a harsh upbringing working in the fields, he sold his land as soon as he inherited it, bought a ship with a capacity of 300 *metretae*, on which 'he'd transported goods from everywhere until he'd got the possessions he had then' (trans. W. de Melo).¹⁸ The *metretes*, a Greek unit of measurement of volume, equates to about 39 litres—that is, one and a half times an amphora. If we take Plautus at face value, this makes for a tonnage that would have been quite sufficient to make a man rich through trading on a ship of his own. The text would be very relevant to our subject, were it not for the fact that it has been seen for many years as actually a borrowing from the *plebiscitum Claudianum* itself. In particular, H. Hill thought the tonnage was too small and argued that, although Plautus copied the unit of measurement from his source (the *Emporos* by Philemon, whose life straddled the fourth and third centuries BC), he then changed the figure, by way of a humorous reference to the Roman law.¹⁹ However (apart from the hotly debated passage from Thucydides about the limitations on tonnage accepted by Sparta in 423 BC²⁰), Hill's references to sizes are very anachronistic: he compares the 300 *metretae* with the heavy tonnages of ships from the late Republic and the first century AD, which was an utterly different economic and naval context. The Kyrenia wreck, one of the best studied of all, went down north of Cyprus in 300 BC with her cargo of mainly amphorae from Rhodes, which amounted to no more than 20 tons dead weight. It is conceivable, I suggest, that Philemon may have meant the small type of boat that a peasant of modest means might buy after selling his property and going in for trade.

All in all, the ship with a capacity of 300 amphorae from the *plebiscitum Claudianum* poses all the problems of interpretation raised by any limit case. It is not out of the question that, with a ship of that size, in the third century BC, a man might have engaged in commercial activities, or even in transport

¹⁷ Benoit (1961: 29, 36).

¹⁸ Plautus, *Merc.* 76–9.

¹⁹ Hill (1958). The matter is complicated by the fact that Greek *metretes* is solely a unit of measurement, whereas Latin *metreta* can mean an actual amphora. So it is uncertain whether we should work with an abstract volume, as Hill did (giving a burden of about 8 tons, which is very small), or with a material object, as Wallinga prefers for *amphora*, which means a dead weight in the vicinity of 16–18 tons and gross tonnage of over 25 shipping tons.

²⁰ Thucydides, IV. 118, 5.

activities. But it would have been, especially in the field of transport, on a very small scale. As a rule, the business of transporting was not nearly as lucrative as the business of trading; and no ship operator with a single 300-amphorae vessel would have stood to make very much money. If a senator had wished to engage in the business of transporting goods or more generally in operating a ship, the principle of the law would not have prevented this; but it would have strictly curtailed his activity and any profit he would have earned from it, which would probably have made it seem unattractive to him.²¹ It should be remembered, after all, that the limit of 300 amphorae could also be a hindrance for the owners of large vineyards, as we shall see.

A TONNAGE DEEMED SUFFICIENT FOR TRANSPORTING ONE'S OWN PRODUCE

The total capacity of the 300 amphorae was seventy-eight hectolitres. Now, clearly, it was not impossible for a grower to transport his wine in several loads;²² but that would be to his disadvantage, if there was a market where he could sell it as a single batch. And the farther away the point of sale, the greater the disadvantage. We may assume that the legal capacity was supposed to equate to the produce from an estate. Crop yields in peninsular Italy in the third century BC were not very high. Even so, Cato recommends the possession of enough *dolia* to store five vintages, at an average of thirty-three hectolitres per hectare per year.²³ This was a maximum. If we assume a range of yields of 15–30 hectolitres per hectare, the vineyards falling under the *plebiscitum Claudianum* would have had a surface area of between 2.5 and 5.2 hectares, in other words 10–20 *iugera*. This falls well short of the standard vineyard envisaged by Cato in *De agricultura*: 100 *iugera*.²⁴ In every respect, as regards both shipping and production volume, the limit of 300 amphorae would appear to have been set as low as was possible without being preposterous.

QUAESTUS AND THE ORDERING OF THE PARTS OF THE PREAMBLE

The prohibition and the two sentences of the preamble are in the form of a reverse syllogism. In its proper order, it contains a major premiss, a minor

²¹ On this point, I am close to Andreau (1980: 914): 'It especially prevented them from being active in seaborne trade'; and Clemente (1983: 255).

²² Wallinga (1964: 21–2, n. 2). ²³ Cato, *Agr.* 11, 1.

²⁴ Cato, *Agr.* 11; Tchernia (1995: 383–4, 393).

premiss, and the conclusion. The major premiss states that any *quaestus* is dishonourable for senators. The minor premiss states that transporting products from one's estate does not require a ship with a capacity greater than 300 amphorae. And the conclusion is that senators have no need to own ships with a capacity greater than 300 amphorae. We can clarify the logic of the syllogism by teasing out what is implicit in the minor premiss: transporting one's own produce and selling it does not entail a *quaestus*; whereas any other use to which a boat may be put (those detailed) does. The conclusion becomes inescapable: since a ship with a capacity greater than 300 amphorae is superfluous for transporting one's own produce, the only purpose for owning such a vessel would be to operate it *in quaestum*; and that would be dishonourable for a senator. The limit of 300 amphorae serves as a convenient benchmark, a concrete way of preventing the use of a ship for *quaestus*, without having to bother about what sort of cargoes it carries. A loophole in the law gave senators the right to operate a small vessel for commercial purposes; but the temptation to do this was seen more as a theoretical possibility than as a reality.

The difficulty of interpretation arises from the relation between the prohibition and the major premiss. The syllogism presents this premiss as a general idea that justifies putting a more restricted prohibition on an aspiration. Yet there are many different ways of making a *quaestus*, without owning a ship; so clearly there was a disparity between the principle stated in the major premiss and the prohibition in the conclusion, which does not require complete compliance. If one reads the general principle as intended to be normative, the disparity becomes a contradiction.

It is this discrepancy that makes sense of most of the debate on the *plebiscitum Claudianum* and is the origin of the questions that keep being asked. Why did the lawmakers go no further? What was their real purpose? What meaning should be read into the word *quaestus*? What bearing should historical context have on each of the disparities in the text? And how can we explain the senators' hatred for Flaminius, the only one among them who supported the law?

To answer these questions, I propose examining later parallels that we can see with the *plebiscitum Claudianum*.

EVOLUTION OF THE *PLEBISCITUM CLAUDIANUM*: IN *VERREM* AND THE *LEX IULIA DE REPETUNDIS*

The point I wish to focus on in the *lex Iulia de repetundis* (59 BC) has been very familiar since the publication in 1955 of a parchment that the University of

Leyden had acquired the previous year. It contains twenty-three lines of the *Sententiae* of Paulus, lines 7–11 of which read as follows:

senatores parentesue eorum, in quorum potestate sunt, uectigalia publica conducere, nauem in quaestum habere, equosue curules praebendos suscipere prohibentur; idque factum repetundarum lege uindicatur (Senators or their parents, under whose potestas they fall, are forbidden to operate as tax-farmers, to own a ship for commercial gain, or to undertake to provide horses for the circus; these practices are punished by the repetundae law). (trans. E. M. Serrao (1956))

As we have just seen, in the light of the preamble to the *plebiscitum Claudianum*, the limit of 300 amphorae should be read as a more or less rigorous attempt to prevent direct profiting from shipowning. The *Sententiae* of Paulus put a finer point upon things: the prohibition is no longer based on a tangible and easily recognizable criterion, the size of the ship, but on the use that its owner puts it to. This improved the law, in the sense that the limit of 300 amphorae, while it restricted *quaestus*-making activities, did not completely prevent them. But it also impaired the efficacy of ways of enforcing the law, since owning a larger and easily recognizable ship was no longer forbidden and the use it was put to had to be checked.

The reason for the change seems clear: in 218 BC, the 300-amphorae limit had left open the theoretical possibility of owning a ship large enough to transport all the amphorae containing one's own vintage. Even at that time, such a ship would have been far too small to transport wine from Cato's standard vineyard with its surface area of 100 *jugera* capable of producing 3,000–4,000 amphorae of wine. A century later, a time that saw the maximum development of great wine-growing properties, such a limitation made no sense. The only solution was to spell out the intent of the law: to prohibit commercial use of such a ship.

This suggests we should reread the passage in *In Verrem* about the trireme that Verres was given by the Mamertini.²⁵ As Cicero says in his preliminaries that the lawyer representing Verres should not fear that he, Cicero, would use against his client the laws forbidding senators to own ships, since they are archaic and moribund (*antiquae et mortuae*), it has been fairly generally assumed that, by 70 BC, the *plebiscitum Claudianum* was a dead letter.²⁶ In fact, though, a more contextualized reading of Cicero leads us to almost the opposite conclusion.

From the Mamertini, Verres received an illicit gift of a large trireme, which put in at Velia, where it was seen by many people. Here, Cicero has two purposes in mind: to argue against any claim that Verres paid for the construction of the trireme out of his own pocket; and to prove that there was only

²⁵ Cicero, *Verr.* II.v.44–6.

²⁶ To my knowledge, Aubert (2004: 167) would appear to be the only exception.

one thing that Verres could be using the ship for, bringing to the mainland the ill-gotten gains from his looting in Sicily. This is why he discusses the range of all other possible uses that Verres might make of the trireme and demonstrates that every one of these is either impossible or barely credible. In Sicily, Verres had no need of a ship, since the state supplied him with vessels for all his official travel and his position did not permit him to travel for personal purposes. As for transporting produce from his lands in Sicily to Italy, he had no right to own an estate in his province. The idea that he might have sailed the ship to Italy, empty, prompts the question: for what purpose? To operate it as a commercial concern, *nauculariam, cum Romam uenisses, esse facturum*? The question was entirely rhetorical, and Cicero did not bother to answer the hypothesis it raised, which was a manifest absurdity and a farce. There remained one final possibility: that Verres owned an estate on the Italian seaboard and the ship could have served *ad fructus deportandos*. But, as everyone knew, Verres owned no such thing. This is why Cicero is certain that the only reason for the building of the trireme was that Verres needed to bring his booty to the mainland.²⁷

The last two hypotheses canvassed by Cicero are relevant to both the *plebiscitum Claudianum* and the *lex Iulia de repetundis*. In 70 BC, it was possible to own a ship for the purpose of transporting one's produce if one owned an estate by the sea. This was stipulated in the *plebiscitum Claudianum* in terms very close to those used by Cicero: *ad fructus ex agris uectandos*. But a senator must not act as a ship operator—in other words, earn profit from running a vessel and owning it *in quaestum*, which is what the *lex Iulia de repetundis* says. To state the case more pointedly, it is not just illegal for a senator to be a ship operator, it is literally unthinkable. The prohibition of 218 BC had become integral to people's behaviour and mindsets. Cicero, on the other hand, says nothing about the size of the ship owned by Verres. This is, in fact, the only 'archaic and moribund' part of the statute of 218 BC. And that, and only that, is what Cicero says to Hortensius as he broaches his development. The shift towards the definition given by the *lex Iulia de repetundis*, the

²⁷ *Quid eos loqui qui uidebant, quid existimare eos qui audiebant, arbitrabare? Inanem te nauem esse illam in Italiam adducturum? Nauiculariam, cum Romam uenisses, esse facturum? Ne illud quidem quisquam poterat suspicari, te in Italia maritimum habere fundum et ad fructus deportandos onerariam nauem comparare. Eiusmodi uoluisti de te sermonem esse omnium, palam ut loquerentur te illam nauem parare quae praedam ex Sicilia deportaret et ad ea furta quae reliquisses commearet* ('What do you suppose those who saw it would say or those who heard it think? That you were going to take the ship to Italy empty? That you were going into the shipping business when you reached Rome? No one could even suppose that you had an estate on the Italian coast, and were providing yourself with a merchant vessel for the export of your produce. You chose to make everyone talk about you in such a fashion that they said openly that you were getting this ship in order to export your plunder from Sicily in it, and to send it back again for such stolen property') (trans. L. H. G. Greenwood). The interpretation I give here coincides with that advanced by Hesnard and Gianfrotta (1989: 399–400).

prohibition on *nauem in quaestum habere*, and no longer on owning a ship of more than a particular capacity, had come to pass, and it would have been pointless and inept to base an argument on the 300-amphorae limit, even though the shift does not yet appear to have been enshrined in law. Owners of estates on the coast blatantly flouted the letter but not the spirit of the *plebiscitum Claudianum*. With the increase in size of estates, the limitation to a capacity of 300 amphorae had obviously become unenforceable.

THE IMPOSSIBILITY OF TENDERING FOR TAX GRAIN CONTRACTS

We can learn something else from the Leyden fragment. In it, Paulus puts the prohibition on shipowning *in quaestum* together with two further prohibitions concerning state contracts: one on participating in tenders for tax-gathering; and the other on supplying the horses required for state-sponsored ceremonies. In both cases, the aim was to forbid senators to arbitrate in matters to which they were parties. It would be neat if the restriction on the use of ships had had a similar objective. It is noteworthy that Guido Clemente,²⁸ following the lead of Mommsen (who took the view for a while that the *plebiscitum Claudianum* covered also the prohibition on tendering for public contracts),²⁹ suggested that the *plebiscitum Claudianum* dealt with senators' roles in administration of the provinces, particularly in transporting grain from Sicily and Sardinia and supplying the armies. And Fausto Zevi,³⁰ in his discussion of the size of grain ships in the third century BC, went even farther and linked it to the problems posed by the transport of grain, notably tax grain. This is an idea that merits closer examination.

Claude Nicolet has explained the workings of the system for transporting tax grain. It had to be delivered to a port by the tithe-owners. From there on, it was the responsibility of the praetor to make sure it reached Rome or whatever other destination it was bound for. This required recourse to another round of tendering, with bidding by the *manicipes* who would undertake the seaborne transport. They were ship operators who, in return for payment, put ships at the disposal of the state. What ships were these?

Fausto Zevi has long been stressing the size of grain ships in the third century BC. Hiero II, even before he had the exceptional craft *Syracusia* built, had been interested in large vessels for transporting wheat. Such vessels were

²⁸ Clemente (1983: 257–8).

²⁹ Mommsen (1908: 94 (bk III, ch. XII)). He amended his view in SR III. 1, 510, n. 1, and III. 2, 898–9.

³⁰ Zevi (1994: 64).

very necessary. When he visited Rome in 237, he brought a gift of 200,000 *modii* of wheat. In 216, two years after the vote on the *plebiscitum Claudianum*, he sent to Rome 500,000 *modii* of wheat and barley. Somewhat later, in 190 and 170, Massinissa made promises of gifts of a million and a million and a half *modii* of wheat. The credibility of such figures is attested by an inscription from Larissa in the middle of the second century BC that speaks of a transport of 482,000 *modii*.³¹

We have no source for estimating the amounts of Sicilian and Sardinian grain taken to Rome or delivered to the armies before the second of the Punic Wars; but it is hard to agree with Peter Garnsey's view³² that, until the last years of the third century BC, they were negligible. Antonino Pinzone has tried to show that the *lex Hieronica* was applied in the conquered part of Sicily from the time of Flaminius's praetorship in 227.³³ Whatever the case may be on that, the Romans must have demanded grain from that area. It was the requisitioning of wheat from Sardinia that caused Hampsicoras's revolt in 215.³⁴ The amounts required must not have been very different from the figures already quoted. For transporting hundreds of thousands of *modii*, it was out of the question, as Fausto Zevi has pointed out, to use ships with a capacity of 300 amphorae, which could have accommodated 4,000 *modii* at the very outside and very likely no more than 3,000.³⁵ It would have necessitated far too many round-trips. The same could be said about military transports, which were also subject to tender and required ships of substantial tonnage. This has been well, and properly, stressed by Rachel Feig Vishnia, whose interpretation of the *plebiscitum Claudianum* rests fairly and squarely upon this point.³⁶ Those who were awarded contracts for the transport of tax grain had the use of ships that were much larger than the ones that, at the same period, carried the amphorae of a still-embryonic wine export trade. One assured effect of the *plebiscitum Claudianum* was, because of that difference, to prevent senators from participating, even via the intermediary of an *exercitor naus*, in tendering for this transportation; and that was at least one of its main objectives.³⁷

³¹ Viriouvét (1985: 91–6); Garnsey (1988: 183–5).

³² Garnsey (1988: 183).

³³ Pinzone (1999: 7–37); the idea was accepted by Clemente (1980–1: 247). For later views, see Serrati (2000: 123–6) and Zevi (2002: 44).

³⁴ Rowland (1994: 257–8).

³⁵ By volume, the 24-tonners which I see as 300-amphorae vessels could take up to 4,000 *modii*; but by weight, they could hardly have accommodated 2,000 of them. Presumably, the hold could not have been completely filled without prejudice to the boat's equilibrium.

³⁶ Feig Vishnia (1996: 34–43).

³⁷ This interpretation implies almost necessarily that the prohibition on bidding for tax-farming contracts was at the least contemporary with the *plebiscitum Claudianum*; this was Mommsen's opinion (SR III. 1, 510, n. 1), one that is now shared by Nicolet (1977: 748). I leave aside the many debates on the date of the measure.

THE SENATORS' ANGER

Was the aim to put an end to isolated practices? Or should we assume that senators had been falling over one another to bid for transport contracts, a source of income that they would have been very sorry to have to forgo? As we have seen, a century and a half later (points of reference are so few and far between in ancient history that we cannot always ignore those that are too far apart), Cicero's speeches against Verres show that the *plebiscitum Claudianum* was observed as far as the use of ships was concerned, though not in respect of their size. From Cicero's way of stating things, one could conclude that the senators accepted without great difficulty the impossibility of ever being ship operators. The prohibition had become an unexceptionable part of everyday life and lasted till the fourth century AD.³⁸

Without recourse to violence, no prohibition put upon the practices of a body of people in a position of power has a hope of being observed unless it meets with a consensus of at least a significant number of those affected by it. It strikes me as implausible that, even in 218 BC, so many senators should have been shipowners that they were almost unanimously supported by their peers, and that, once the law had been passed, they just quietly gave up this activity. Against that, as we have seen, the 300 amphorae represent the yield from a vineyard of ten to twenty *jugera*—that is, five to ten times smaller than the example Cato gives about half a century later. This is not much more than the emblematic and mythical seven *jugera* of the properties of Cincinnatus and Regulus, and M' Curius Dentatus, who, founding a colony on the territory of the Sabines after his victories, is said to have declined the fifty *jugera* of land offered by the Senate, preferring to receive only the regulation grant of seven *jugera*.³⁹ There would no doubt be something skewed in such a comparison, as vines could not occupy more than a part of a whole estate. But the growth in large estates before the Second Punic War is now accepted. In a recent article,⁴⁰ Christian van der Mersch surveys all the evidence and proves the existence of substantial vineyards in the third century BC and how interested great families were in them. This was when exports of central Italian wine by sea were just beginning. The 300-amphorae limit may have been adequate for small or middling vineyards; but, even if we assume that several voyages were required to move wine from a particular vintage, the limit would still have been a serious impediment for the largest landowners.

The figure of 300 should be seen as not only a way of depriving senators of the possibility of bidding for public contracts and earning a *quaestus* by operating a ship, but also as a sign of an ideology favourable to smaller

³⁸ *Dig. L.* 5, 3; Sirks (1991a: 71–2).

³⁹ Columella, I, *praef.*, 14.

⁴⁰ Van der Mersch (2001). On the possibility that members of the senatorial class were owners of vineyards in Sicily at the time of Hiero II, see Zevi (2002: 46–7).

property-owners. There is nothing surprising in the fact that Flaminius, who can be seen to be continuing the policies of M' Curius Dentatus, supported it.⁴¹ The *plebiscitum Claudianum* is to some extent a law *de modo agrorum*.⁴² The tribune of the plebs, Q. Claudius, and Flaminius were hoping to kill two birds with one stone: to put relations between the state and private entrepreneurs on a more moral footing, an idea that few found objectionable and was put into effect; and to curb the development of vast estates at a time when Italian wines were starting to find promising markets overseas, an idea that was deemed unacceptable and was only ever put into practice briefly, if at all.⁴³ The jetty that M. Aemilius Lepidus had built alongside his *praedia* at Terracina in 179 was definitely intended for ships with a capacity greater than 300 amphorae.⁴⁴

QUAESTUS OMNIS PATRIBUS INDECORUS: THE THIRD CENTURY

Having surveyed the foreseeable effects of the 300-amphorae limit, we come back to the discrepancy between them and what I have called the major premiss of the syllogism (*quaestus omnis patribus indecorus uisus* = 'every form of profit was thought to be beneath the dignity of senators'): the *plebiscitum Claudianum* was nothing like a prohibition on senators' making all conceivable types of *quaestus*, in the sense defined by Jean Andreau in an article published at the same time as this one of mine⁴⁵—namely, any occupation serving as a livelihood and any profit from something other than agriculture.

A preamble will often justify a bill by reference to general principles derived from a widespread ideology, even though the bill itself does not attempt to enshrine all of them in law. So, in my examination of that part of the text,

⁴¹ Càssola (1962: 93, n. 11, 137, 218.

⁴² Claude Nicolet once published an insight along these same lines (1977: 746), but omitted it in (2000 (1980)): 'The law even tried indirectly to limit the extent or at least the yield of their properties.'

⁴³ It is not known whether the law laid down sanctions or whether it was a *lex imperfecta*, as Guarino (1994 (1982)) and Clemente (1990: 51) say. Nicolet (2000: 28–9, 389, n. 13 (1980: 880, 893, n. 13)) is unsure, pointing out that, in *In Verrem*, Cicero's sentence *fuit ista seueritas in iudiciis* may indicate that some cases went to court. Serrao (1956: 20, n. 5) also expressed doubts. The most widely held view is that people got round the law. D'Orta (1976–8: 188–94) argues that it had really lapsed. Guarino (1994: iii. 280–98 (1982)) and Clemente (1984: 176) both note that it was never spoken of and that there were no echoes of polemics or *notae censoriae* that might have arisen from it.

⁴⁴ Livy, XL. 51, 2. See D'Arms (1981: 36).

⁴⁵ Andreau (2007a).

I shall focus not on the outcomes flowing from the law or even on real behaviours, but on people's ways of thinking.

One preliminary aspect of the problem was raised by Guido Clemente, who, after stating what I have just stated, dismissed the idea as anachronistic. His view, like that of Emilio Gabba, was that, in the late third century BC, *quaestus* was in no way deemed to be reprehensible for senators. In the view of these scholars, that notion belonged to an ideology that did not develop until some time during the second century. Since the preamble to the 218 bill could therefore not have derived from such an ideology, it must have been Livy himself, speaking as a man of a different time, who inserted it.⁴⁶

If one accepts this hypothesis, it should be applied to two other passages, one from Livy, the other from Cicero. In 217, after the battle of Lake Trasimene, the plebs of Capua were preparing to massacre the senators and hand over the city to Hannibal. The *meddix* Pacuvius Calavius thought up a stratagem: he persuaded the Senate to trust him and agree to be locked inside the *curia*; then he summoned the plebs and told them he was giving them the opportunity to condemn and execute all the bad senators, on condition that they replaced them with better ones. Naturally, the nominees were deemed to be even worse than the incumbents and the Senate was saved. One of the charges levelled against a new candidate concerned the disreputable nature of his trade or business, *prudendae artis aut quaestus genus*.⁴⁷ This entails a distinction between different types of *quaestus*, which I shall come back to.

The laws governing the senates of Agrigentum and Halaesa conform more closely to the principle implicit in the major premiss of the *plebiscitum Claudianum*. In the Verrine speeches, Cicero tells us that Scipio⁴⁸ drew up rules for recruitment to the senate of Agrigentum, which, he says, were exactly the same, save for one addition, as those given to the senate of Halaesa in 95 BC (and which he sets out a little earlier): one of them deals with *quaestus: de quaestu, quem qui fecisset ne legeretur*.⁴⁹ This could appear to be, in the late third century or early second, a parallel with the *plebiscitum Claudianum*.

These texts, too, however, can be doubted. The one about Pacuvius Calavius is anecdotal and shows obvious signs of having been cobbled together. Nor can we be sure that there was an exact equivalence between the rules handed down at Halaesa in 95 and those at Agrigentum in 205, though Cicero is generally careful with such things. Doubts, of course, do not amount to proof. These documents suggest that we should briefly rehearse the arguments on the ideology of *quaestus* in the third century, especially since the supposed

⁴⁶ Gabba (1988: 32–3 (1981)); Guarino (1994: 291 (1982)); Clemente (1983: 255–6: 1984: 172–3); Narducci (1989: 248, n. 44).

⁴⁷ Livy, XXIII. 3–4.

⁴⁸ This could be either Scipio Africanus, who could have handed down the law during his consulate in 205, or L. Cornelius Scipio Asiaticus, praetor of Sicily in 193 (Gabba 1959: 310).

⁴⁹ Verr. II.ii.122–3.

contradiction, as Gabba and Clemente argued,⁵⁰ of senators' being against a law enshrining a principle that was broadly accepted lapses if we assume it affected only the size of ships.

The text that has been most discussed is the funeral oration delivered in 221 by Q. Caecilius Metellus for his father, which has come down to us because Pliny the Elder quotes it.⁵¹ The son sets out ten outstanding achievements by L. Caecilius Metellus, each one representing a statement of values and examples worth following for a citizen of his rank. Among them is *pecuniam magnam bono modo inuenire*. These words have been taken as an open declaration of wealth-seeking, which is a fact.⁵² And it is argued that there was no challenge to the legitimacy of senators' *quaestus* until the second century. The words *bono modo*, however, may require closer reading. Of the ten achievements of L. Caecilius Metellus, the only one to attract a qualifier is the amassing of a large fortune. There is no mention of a 'proper' way in *auspicio suo maximas res geri*, or even in *multos liberos relinquere*. How a man becomes rich is the only one that is problematical. Whatever improper ways are implicit in *bono modo*, the words reflect a public debate on the rules to be observed in any attempt to achieve the noble and desirable aim of accumulating great wealth.

Claude Nicolet has given us a relevant reminder of Aristotle's comment that, in many oligarchies, magistrates had no right to *χρηματίζεισθαι*—that is, to earn money by engaging in business—something that was done, however, in Carthage 'and they have not yet had a revolution'.⁵³ After the First Punic War, discussion on the matter became, of necessity, integral to Roman politics. Part of the question implied by *bono modo* was the definition of which types of profit were suitable for the ruling classes.

Nicolet's is the most accurate reading of Livy's sentence: *uisus* refers to the proponents of the law.⁵⁴ One could phrase it like this: 'They believed that any profit-seeking was unseemly for a senator.' In meaning and in tense, *habitus* and *uisus* are parallel, and it is difficult to separate them. On the matter of the size of ships, the first of these words refers to an opinion that was clearly long out of date in Livy's day. Everything suggests that Livy respected the spirit of the speeches delivered in 218. The principle of *quaestus omnis patribus indecorus* really was propounded by Q. Claudius or Flaminius. It in no way conflicted with accepted public opinion. It could, however, be seen as an extremist position on a scale on which less out-and-out positions would have been possible.

⁵⁰ Gabba (1988: 32 (1981)); Clemente (1990: 51–2).

⁵¹ Pliny, HN VII. 139.

⁵² Gabba (1988: 28 (1981)).

⁵³ Nicolet (2000: 30 (1980: 880–1)); Aristotle, *Pol.* V. 10 (1316b).

⁵⁴ Nicolet (2000: 28 (1980: 879)).

THE MEANINGS OF QUAESTUS

At this point, I must draw on Jean Andreau's acute analysis of the meaning of the word *quaestus*.⁵⁵ During the Republican period, *quaestus* meant 'both profit and the activity which afforded profit'. This broad sense⁵⁶ is often split into two more precise meanings. In the first of these, *quaestus* means 'a livelihood' (Andreau's word being *gagne-pain*). This sense applied to people who did not belong to the higher orders. In Plautus, it is not only very frequent, but eventually comes close to expressing the idea of 'role' in ironic passages where courtesans speak of the 'livelihood' of being a lover.⁵⁷ In its second usage, the word means non-agricultural income;⁵⁸ and it applies to the 'extra income of notables', as Andreau says, for they, and particularly senators, by virtue of their social status, are landholders whose wealth derives in principle from agriculture, with the proviso that agriculture at this level is not considered to be a livelihood.

The gap separating, and linking, these two meanings gives scope for the interplay of the prohibitions on senators' *quaestus* and social taboos more generally. The closer the word tends towards 'livelihood', the greater the condemnation of *quaestus* among the elite. Livelihoods were themselves divided into *liberales* and *sordidi*,⁵⁹ any *sordidus* type of occupation being associated with the most contemptible social and personal status, regardless of how rich anyone doing such work might be. *Quaestus* was often coupled with *ars*: *ars* required know-how, a technique that was not necessary in a *quaestus*.⁶⁰ So it was better to practise an *ars liberalis* than a *quaestus sordidus*, though it was still a livelihood. In a famous passage from *De officiis*,⁶¹ Cicero writes a disquisition in moral philosophy about the *artificia* and *quaestus*. His

⁵⁵ Andreau (2007a).

⁵⁶ It is sometimes to be found in Plautus, where there is even an example with the sense of 'receipt of moneys', as distinct from expenditure (*sumptus*), a sense that Andreau cannot find elsewhere till the period of the Empire: *Poen.* 286–7.

⁵⁷ Plautus, *As.* 186; *Truc.* 416.

⁵⁸ The sole exception is in the preface to Cato's *De agricultura*. Andreau's two explanations do not strike me as mutually exclusive. Devoting the opening line of a work on agriculture to praise of trade is provocative, which fits Cato's character. This may also reflect a debate that, a century later, would have run its course. In that same opening line, however, Cato also defines the question that he is raising: how to *rem quaerere* (and not *rem augere*; *qui rem quaerunt* is also the term Cicero applies, in the *Paradoxa Stoicorum*, VI. 46, to traders and beneficiaries of public tenders). The verb *quaerere* is naturally echoed a little later in *quaestus*. And in that context, when Cato mentions the *bonus agricola bonusque colonus* who makes a good soldier and whose mind is least occupied with evil thoughts, he is referring not to the owners of several hundred *jugera* for whom he is writing, but to peasants for whom agriculture is purely and simply a livelihood, as Andreau says. By equating *quaestus* with the earnings of such peasants, he is giving them the hope of leaving behind subsistence farming and achieving wealth.

⁵⁹ On these matters, see Andreau (1992).

⁶⁰ Cf. Plautus, *Rud.* 292: *quibus nec quaestus est nec didicere artem*.

⁶¹ Cicero, *Off.* I. 150–1.

comments are about the lower orders, *iis quorum ordini conueniunt*, as he says. The thought that any member of the higher order might practise one of these professions would never have occurred to him. And his judgement on the moral value of the activities as livelihoods (based on their public usefulness) has no bearing on the judgement he would make of them if they were 'extra income': *generatores*, he says, are the lowest of the low, despite which he and his friends lent money, as would all senators under the Empire.⁶² In Paul Veyne's words, 'not being' something was important, but 'doing' something was acceptable.⁶³

To have had a livelihood or to have had ancestors who worked for their living was the strongest insult that could be levelled at a person of high rank, the one that could most lower him in people's estimation. Political enemies went in for it a lot. Of all the words associated with the activity in question, they chose the most contemptuous possible; or else they specified that there had been a real risk of dying of hunger. The victim closest in time to the period under discussion was Terentius Varro, who was defeated at the battle of Cannae, then defamed in our sources by the aristocratic tradition: his father was said to have been a butcher (*lanius*) in retail, and he himself was supposed to have 'lived off the profit from this particularly sordid trade'.⁶⁴ As for Ventidius Bassus, he 'had trouble earning enough to live on' by supplying the army with mules and carts. This definitely did not mean he was the scum of the earth, but it was the reason why much later, in a letter to Cicero, Plancus called him a *mulio*, a term that could mean a transport operator, a mule dealer, and a stable hand.⁶⁵ In a speech replying to the Philippics, Fufius Calenus, a supporter of Mark Antony, revealed that Cicero's father was a *knaphheus*, a wool comber.⁶⁶ Suetonius quotes accusations of this sort from enemies of Augustus or Vitellius.⁶⁷

On the other hand, even Cicero did not wish to suggest that Verres might once have been a ship operator; instead, he invented a hapax and said *nauculariam facere*, 'engage in shipping operations'. When Suetonius spoke in a laudatory context of Vespasian and his family, he was careful to avoid using names of occupations: Vespasian's grandfather, rather than being a *coactor argentarius*, was in the habit of collecting payments;⁶⁸ his father was

⁶² See Andreau (2001: 34–7).

⁶³ Veyne (1985: 133). On this whole question, see Veyne (2001: 131–62 (1979a)). His amended terminology—'occasional (or rather inessential) undertakings of the nobles'—strikes me as pertinent (2001: 157 and n. 51).

⁶⁴ Livy, XXII. 25, 18–26, 1; Valerius Maximus, III. 4, 4. My thanks to Sylvie Pittia, who quoted the instance of Terentius Varro during the Paris colloquium and gave me the references.

⁶⁵ Aulus Gellius, XV. 4; Cicero, *Fam.*, X. 18, 3.

⁶⁶ See Coarelli (1996b: 201), who draws on Plutarch, *Cic.* I. 1–2, and Cassius Dio, XLVI. 1, 28.

⁶⁷ Suetonius, *Aug.* II. 6 and III. 1, *Vit.*, II. 1.

⁶⁸ Suetonius, *Vesp.* I. 2: *coactiones argentarias factitauit*. I endorse Andreau's interpretation (1987: 160); on pp. 423–6 of the same volume, he studies Cicero's usage of *argentariam facere* and reaches the same conclusions.

not a *fenerator*, he made loans against pledges (*faenus exercuit*).⁶⁹ In the province of Africa, Vespasian himself was such an upright consul that he went back to Rome ruined and 'by necessity he had to resort to trading to keep up his position' (*necessarioque ad mangonicos quaestus sustinendae dignitatis causa descenderit*). The oxymoron *sustinere*—*descendere* disguises a somewhat rash paradox, but Suetonius copes with this difficulty by the use of *mangonicos quaestus*, which does not mean 'being' a *mango*; his form of words can be taken to have the meaning of 'extra income'. His adjective is extremely rare, Suetonius being the only writer who ever used it in this sense. The people were less indulgent and called Vespasian a *mulio*.⁷⁰

These remarks help to clarify the meaning of *quaestus* in the *plebiscitum Claudianum* and the other texts I have been quoting from. In Capua, a city of artisans and traders, the plebs objected that the candidate for the Senate had a degrading type of *quaestus* or *ars*. What is meant here is obviously livelihoods. This comes close to the prohibitions in lines 122–3 of the Heraclea table, which prevent anyone who had been a prostitute, a trainer of gladiators, or an actor from becoming a decurion. Such occupations were the mark of ignominy;⁷¹ and we do not know whether the Capuans added any to the list of activities that justified barring a man from the Senate. What we can say, though, is that the document suggests there was a hierarchy of livelihoods and that not all of them would have ruled a man out.

The *lex data* of Agrigentum and Halaesa is different, in that it reflects a situation in Rome. The prohibition is broader than in Capua and the law table of Heraclea:⁷² *qui quaestum fecisset*, pure and simple. How to read *quaestus* in this passage has given scholars pause. Years ago, Gabba saw two possible meanings: either *corpore* is understood (which would equate to one of the prohibitions for ignominy in the Heraclea table) or *quaestus* should be read as meaning 'commercial activity'. Neither of these interpretations is satisfactory, the first being too restrictive (since in that case the text would say nothing about the other ignominious occupations) and the second gives *quaestus* a meaning it does not have, unless the context clearly demands it. Bearing in mind what I say above, the right interpretation is the one given by La Ville de Mirmont in his edition: 'the lucrative professions, to prevent nomination of anyone who had practised them'. This makes clear that what is intended is occupations that were the main source of income. It is the best-attested sense

⁶⁹ Suetonius, *Vesp.* I. 4.

⁷⁰ Suetonius, *Vesp.* IV. 6. We could add another quotation in the same vein, this one from a passage of praise in *De uiris illustribus*, III. 72, 1, about M. Aemilius Scaurus, whose father *quamuis nobilis, ob paupertatem carbonarium negotium exercuit*, which was not as bad as if he had been a *carbonarius*.

⁷¹ *Dig.* III. 2.

⁷² The table excluded also (ll. 94–5) anyone in an occupation linked to the municipality, such as town criers and undertakers.

of *quaestum facere*.⁷³ This particular prohibition shows perfectly how ignominious it would be for a senator to have worked, or even to have had an ancestor who had worked, in an occupation that defined his social status.

The *quaestus* referred to in the *plebiscitum Claudianum* does not fit into such a neat category. Obviously, it alludes to the money-making activities of the elite and subsumes all those connected with the operation of a ship for commercial purposes. It must be taken in its broadest connotations: it means all money-making that does not derive from agriculture.

So the three texts I have just examined cover the word's whole range of meanings: the dishonourable form; the livelihood; and the making of profit in general, with particular relevance to the 'incidental' income of the elite. The proponents of the *plebiscitum Claudianum* had a strict conception of the code of financial conduct suitable for senators.

TALK AND ACTIONS

Actually, I know of only one other passage that expresses the principle of the *plebiscitum Claudianum* at its broadest. It is to be found in Cicero's *Paradoxa Stoicorum* and is just as often quoted as the passage from *De officiis* (the reason for which is precisely that it expresses that broad principle).⁷⁴ Cicero, at the point where he starts to expand on the paradox 'That the wise man alone is rich', calls upon an interlocutor (through whom we can glimpse the figure of Crassus). His insatiable greed leads him to engage in a series of practices that Cicero condemns not as *quaestus illiberales* or *sordidi*, but as *quaestus turpes*, dishonest, which they are, of course, in the examples that he gives, which are a sequence of criminal conducts. Cicero adds a passing concessive clause in which he uses words close to those of the *plebiscitum Claudianum*: *cum isti ordini ne honestus quidem possit esse ullus [quaestus]* ('though really for your rank none can be even respectable').⁷⁵

The Cicero who here has occasion to restate the dishonourable nature of any *quaestus* for senators is the same man who let out houses in the Argiletum and Aventine quarters of Rome, which he says earned him a *merces*—in other

⁷³ Plautus, *Poen.* 1140 (prostitution); *Cap.* 129: *aegre est mihi facere hunc quaestum carcerarium*, that he works as a gaoler; *Dig.* XXXVIII. 1, 19, quoted by Andreau (2007a).

⁷⁴ Cicero, *Par.* VI. 43.

⁷⁵ Narducci (1989: 248, n. 44) argues that Cicero's equating *decorus* with *honestus* is evidence in favour of Livy's having added the sentence to the preamble of the *plebiscitum Claudianum*, an idea that I find unconvincing. Adjectives used to qualify *quaestus*, whether laudatory or derogatory, are few in number; and the similarity of the themes is enough to explain the similarity of the words.

words, a type of *quaestus*.⁷⁶ In addition, he had inherited shops in Puteoli, two of which had fallen into ruin not long afterwards; the others were full of cracks and the tenants had flitted. He sought advice on restoring the buildings, so the financial loss ended up being a *quaestus: ut hoc damnum quaestuosum sit*.⁷⁷ There was nothing secret or covert in any of this. Nor did Cicero object to Crassus having gone in for speculative real estate deals by making money out of house fires, letting out many apartment buildings in Rome, and owning, as a profit-making enterprise, a gang of skilled slaves.⁷⁸

In Cicero's day, if an opportunity for rhetoric came up, a man would speak very reverently of the principle enunciated by Q. Claudius and Flaminius. This did not mean, though, that he practised it. No senator felt himself to be barred from engaging in all sorts of activities related to *quaestus*, in its meaning of 'extra income'. Such activities were, in fact, deplored only if they were dishonest, criminal, or dishonourable. There was uninhibited lending of money for interest and leasing of apartment buildings, houses, and shops; and Varro recommended that, on one's estate, beside a road if it was at all frequented, one should open *tabernae deuersoriae, quae tamen, quamuis sint fructuosae, nihilo magis sunt agri culturae partes*.⁷⁹ This activity, combining hotel-keeping and inn-keeping, is one that has not shocked even modern authors.⁸⁰

There is not enough textual evidence to show that this discrepancy between talk and actions existed in the same way between the First and Second Punic Wars. But to expect it is a basic rule in historical sociology; and there is no reason to doubt that it was alive and well in the third century BC. One genuine enigma, however, remains: making sense of why, in Cicero's day, a senator could shamelessly profit from renting out different sorts of buildings, when it was not even conceivable that he might do the same with a ship. Making sense, that is, of why the *plebiscitum Claudianum* was accepted insofar as it prohibited being a ship operator,⁸¹ and lived on for five centuries under the *lex Iulia de repetundis*, whereas, for example the equally Julian law *de modo credendi possidendique intra Italiam* rapidly lapsed, and an attempt to revive it in AD 33 was abandoned a few months later after a financial crisis.

⁷⁶ Cicero, *Att.* XII. 32; XV. 17, 1.

⁷⁷ Cicero, *Att.* XIV. 9, 1. For *quaestuosus*, see *Tusc.* V. 86: *nam, ut quaestuosa mercatura, fructuosa aratio dicitur*.

⁷⁸ Plutarch, *Crass.* II. 5–7. See also Veyne (2001: 151–2 (1979a)).

⁷⁹ Varro, *Rust.* I. 2, 23.

⁸⁰ It is true that Varro sees this activity as *fructuosa*, a word that befits agricultural income, and not as *quaestuosa*. The point is, however, that he never uses *quaestus*; the word was not in his vocabulary, and he was obliged to make it clear that what he means is something totally different from garnering in crops from the estate. [See pp. 10–11 for a more appropriate interpretation of this passage.]

⁸¹ On the possible mention by Ennius (*Ann.* II. 94–5) of ship operators at Ostia and the description of their occupation as a 'livelihood' (*nautisque mari quaesentibus uitam*), see the interpretation by Zevi (2002: 44).

PER INCERTA MARIS

Boudewijn Sirks suspects that the prohibition in the *plebiscitum Claudianum* derived from an old religious taboo: senators had to avoid contact with the sea, which signified death.⁸² This theory strikes one as curious, though we can note that it is based upon a strong Roman aversion to anything maritime. The sea was an alien world; and we need not bring religion into it. There is explicit documentary evidence that gives a pretty clear evocation of a realm that was tempting, but dangerous and evil, a place of risk, worry, and Punic treachery.

Throughout the history of sailing, the very real dangers of seafaring have figured prominently in the ways people have thought about it. At the start of Act III of *The Merchant of Venice*, one of Antonio's ships has been 'wracked' on the Goodwin Sands. This is bad enough; but in the next scene, others, six in all, sailing from 'Tripolis' and various parts of the world, have foundered, and his enemies are beginning to hope that he will not escape bankruptcy. All his cargoes have gone, and he is a ruined man. But the final scene of the play brings its happy surprise: three of the vessels feared lost finally reach safe harbour. On the dangers, and the hopes, of seagoing ventures, there are many ancient texts that are just as eloquent as Shakespeare's. Emilio Gabba has collated those that relate to the period of the *plebiscitum Claudianum*, drawn in particular from Terence and Plautus; they show that the sea is a place where quick riches can be made but also where sudden ruin can happen. In a society stratified into orders, such risks, as Gabba explains, were perceived as being incompatible with the stability of family fortunes in the senatorial order. He adds that the prohibition in the *plebiscitum Claudianum* eventually became consubstantial with being a senator, with ways of thinking and behaving, and that this was why it lasted.⁸³

The realm of risk became internalized as a world of worries and preoccupations, the world of *negotia*. Before Cicero undertook to turn the dilapidation of his shops at Puteoli to good account, they gave him an opportunity to display his equanimity: as he says, his philosophical training meant that they were not even a nuisance to him. Once they had been repaired, however, it must have been a while before they afforded him any further occasion for gratitude to Socrates. If he had been operating ships, he would have had more frequent recourse to philosophy. Even if a *dominus navis* devolved all day-to-day matters entailed in running a ship to an *exercitor navis*, his own involvement⁸⁴ in the operations was closer and more continuous than that of

⁸² Sirks (1991a: 65, n. 77).

⁸³ Gabba (1988: 30, 33–4 (1981); 1988: 71–5, 82 (1985)). I do not accept, however, the proposition that the *plebiscitum Claudianum* and the sumptuary laws shared common objectives. Cf. Zevi (2002: 43–4).

⁸⁴ Clemente (1984: 172–4) has developed the same ideas.

someone who owned houses. A character in Plautus puts it neatly: *Negoti sibi qui uolet uim parare | Nauem et mulierem haec duo comparato*.⁸⁵ Even so, the world being what it is, senators married; and they had ships to transport produce from their estates. But, despite what some say, they did not act as ship operators. Mind you, this did not prevent them from financing shipping operations via fixed-rate loans; but that was another story and brought in quite a different kind of income.

The choices made by the Carthaginians were different, too. Seagoing was natural to them; and, as we have seen, Aristotle said there was no principle barring magistrates from participating in the various forms of *quaestus*, not even those who had a conflicting interest in the management of public affairs. Venality was not frowned upon.⁸⁶ The Romans, after the event, came to see such choices as being the cause of the downfall of Carthage. In *De lege agraria*, Cicero drew on Plato for his analysis of the roots of Carthage's defects: the geographical situation of the city, open to the sea and to trading, begot *studium quaestus*, which begot *studium fallendi*. This was why Carthaginians were cheats and liars.⁸⁷ The effects of this in the domain of public governance were no better. This was the cynical explanation given by Censorinus to Banno at the start of the Third Punic War by way of justifying Roman demands: the Carthaginians shall evacuate the city and resettle at least eighty stades from the sea. These conditions were being imposed upon them in their own interest because, as the Roman consul pointed out, maritime cities are vulnerable: 'The sea reminds you of the dominion and power you once acquired by means of it. It prompts you to wrongdoing and brings you thus into disaster' (trans. H. White).⁸⁸ Underlying this passage (and several others), Didier Viviers has detected 'two fundamentally conflicting political conceptions, one of which we might see as "land-based" or "hoplitic" and the other as being marked by an openness to the sea, which are characteristic of divergent opinions on the ideal city'.⁸⁹

It was this fundamental disparity between the way of life and the institutions of Rome and those of Carthage that Q. Claudius and Flaminius were restating in the preamble to the *plebiscitum Claudianum*, right at the time when warning signs of the Second Punic War were beginning to appear. The

⁸⁵ *Poen.* 210–11: 'A man who wants to create a lot of trouble for himself should get himself a ship and a wife.'

⁸⁶ Aristotle, *Pol.* VI. 56, 1–5. See also Nicolet (2000: 29–30 (1980: 879–81)).

⁸⁷ Cicero, *Agr.* II. 95: *Carthaginienses fraudulentum et mendaces non genere, sed natura loci, quod propter portus suos multis et uariis mercatorum et aduenarum sermonibus ad studium fallendi studio quaestus uocabantur* ('The Carthaginians, a fraudulent and lying nation, were tempted to a fondness for deceiving by a desire of gain, not by their blood, but by the character of their physical location because, owing to the number of their harbours, they had frequent intercourse with merchants and foreigners') (trans. J. H. Freese).

⁸⁸ Appian, *Lib.* (VIII). 86–7.

⁸⁹ Tchernia and Viviers (2000: 786).

quaestus omnis patribus indecorus was opposed to the *studium quaestus* of the Carthaginians. At bottom, there was a landsman's outlook on the world as against a seafarer's. Ever since the First Punic War, this contrasting image of the two political orientations had been structuring Roman discussion on proper ways to grow rich and to benefit from the Mediterranean islands that had fallen into the zone of Rome's dominion. It underlay the tension between two opposite directions for possible expansion, one facing north, with a focus on land, advocated by Flaminius who had crossed the Po and triumphed over the Insubres, and the other facing the Mediterranean, in rivalry with Carthage, favoured by the Scipios.⁹⁰ Through the wording of the *plebiscitum Claudianum*, we can catch a warning against the corrupting sea.

RECAPITULATION

Reaching the end of this discussion, I propose now to recapitulate the points I have been making. The prohibition on owning vessels with a capacity greater than 300 amphorae was, in general, no impediment to most activities definable as *quaestus*, any more than it was to many forms of commercial activity. The preamble, as is often the case, implies an ideology and has no prohibitive force. The question whether some senators grew wealthy through trade, that is by selling something other than the produce of their lands, must be addressed with other evidence.

The outcomes that could be expected from the law as such are as follows:

1. to limit the scope of any shipping activity, whether as ship operator or owner, so strictly that it became impracticable for a senator;
2. to prevent senators from bidding for any shipping of tax grain, which required vessels that were much larger;
3. to hamper the seaborne transport of wine vintaged on the great wine-growing estates.

As a whole, the *plebiscitum Claudianum* is a crux in the debates about the wealth of the political elites and proper ways of acquiring it. One of these debates was already a thing of the past by 219/218 BC: the discussion on the size of estates. In that regard, the *plebiscitum Claudianum* was a rearguard action against any increase in their area. That was why it provoked the almost unanimous hostility of the Senate.

The other debates were, however, still current. They concerned magistrates' participation in making profit from the administration of the provinces and,

⁹⁰ On this, see Càssola (1962).

more generally, their connections to seagoing activities. Through these more particular matters we can perceive an underlying difference of opinion about two opposing concepts of the city: one, like Carthage, open to the sea, and the other a city of the land and its cultivation, as tradition decreed that Rome should be. On the matter of ways of operating ships, enough senators were prepared to accept the ideas espoused by Q. Claudius and Flaminius for their aim to be realized. The same cannot be said of the limit on tonnage, for there the letter of the law was not applied. This explains how the wording of the *lex Iulia de repetundis* became *nauem in quaestum* instead of *maritimam nauem, quae plus quam trecentarum amphorarum esset*.

The Crisis of AD 33

Although the crisis of AD 33 has received much scholarly attention in recent years,¹ I suspect that two points connected with it would bear revisiting: ambiguities in the texts from which we derive our knowledge of it; and the economic laws at work in it. I shall begin by briefly recapping how the crisis originated, the nature of it, and how it developed.

ORIGINS AND DEVELOPMENT

Three texts mention the crisis: Tacitus, *Annals*, VI. 16-17; Suetonius, *Tiberius*, XLVIII. 2; and Cassius Dio, *Roman History*, LVIII. 21, 4-5. Of the three, the only one to give an account of it is Tacitus; Suetonius and Cassius Dio mention it only in passing. This is enough, however, to make for conflicting evidence; moreover, some points in the version by Tacitus lend themselves to different interpretations.

Tacitus says that, in AD 33, *delatores* started levelling accusations against people who were breaking the law laid down by Caesar *de modo credendi possidendique intra Italiam*. This had established, in the matter of arbitrage, a legal correlation between landowning and moneylending for interest.² The law had long since fallen into disuse; and it is actually to Tacitus that we owe our

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¹ Rodewald (1976); Lo Cascio (1978a, b); Wolters (1987); Duncan-Jones (1994: 23-5); Andreau (2001: 192-4).

² In *qui pecunias faenore auctitabant*, the meaning of *auctitabant* is frequentative and not augmentative (see Keil, *Grammatici latini*, VI. 431): those who were in the habit of increasing their income by lending money for interest. A little further on, they are described as *faeneratores*. In particular, they were the financiers from the aristocracy as discussed by Jean Andreau (2001: ch. 2). On this, I must disagree with Wolters (1987: 29), who takes *auctitabant* as evidence for interest rates that were high (though not going beyond legal limits).

knowledge of its existence, the name it bore, and the consequences of the issue, from which we learn without the slightest doubt what it amounted to, or at least the spirit of what it amounted to.

There were so many accused (and they were presumably so powerful) that the *praetor* to whom the cases were assigned decided to refer the whole matter to the Senate. The senators, who Tacitus says were all in breach of the law, requested, and obtained from Tiberius, a stay of eighteen months, to put their family fortunes on a legal footing. It should be added that, according to Cassius Dio, it was Tiberius who reactivated Caesar's law. Suetonius has nothing to say about this first stage of the business.

Despite the stay, a *senatus consultum* (initiated by the Senate, says Tacitus; by Tiberius, says Suetonius) decreed a measure bearing, in the first place, upon the proportion of loans (according to Tacitus) or (according to Suetonius) the proportion of a total fortune (and not loans) that should be invested in land; and, in the second place, upon the proportion of debts to be repaid without delay. These proportions amounted in all cases to two-thirds. I shall come back at greater length to the relationship in this passage between our two sources.

There is also the question of whether the *senatus consultum* was issued after the crisis had begun and in an attempt to make it better might have made it worse (Tacitus, 17, 3: *eaque quae remedio quaesita...in contrarium mutari*) or whether it was what caused the crisis in the first place (Suetonius).³ If things were as Tacitus says, we must assume that the senators were very anxious about the dangers threatening them and had already started to toe the line by making financial arrangements, which had already brought about a crisis of what Tacitus calls *inopia nummorum*.

Whatever the case may be, the nature of the crisis, as recounted by Tacitus, was what might have been expected: a calling-in of loans, a crisis in payments, the selling-off of debtors' property, a drop in the price of land, and ruin for debtors.

Tiberius' solution was to make available 100 million sesterces for three-year loans without interest, secured by a bond in the form of land to the value of twice the sum lent (this measure being vouched for by all three sources). Cassius Dio adds that Tiberius also had the most relentless of the *delatores* put to death there and then; and, according to Tacitus, no further attempts to enforce the *senatus consultum* were made. I do not intend to deal with what followed the stay of eighteen months; it is likely that the reactivation of Caesar's law had been forgotten. This was the end of a short sharp economic crisis.

³ As Lo Cascio (1978a: 245) has pointed out, following others whom he mentions, including Nipperdey in 1852, the words *Ad hoc* at the beginning of the passage may mean either 'besides this' or 'to address this situation'.

LAND PRICES AND INTEREST RATES

The background to the crisis of AD 33 was a simple economic principle: that, in a mainly agricultural society, land prices and the levels of interest rates are inseparably linked, each of them varying in response to the other. If there is no change in the conditions of production and demand, the level of agricultural income relative to the capital immobilized is a function of the price of land: if land is dear, the level is low; but if land is cheap, it is high. However, levels of agricultural income and of interest rates cannot drift too far apart, as the different sources of income tend to balance one another out. Or, to put it more plainly, money flows towards the sources of high income and in so doing brings it down. Should interest rates rise, land will be sold off in the hope of producing capital that will boost the flow towards financial investments. But then the increase of money for lending will invert the movement in interest rates at the same time as agricultural income will be increasing in response to the cost reduction brought about by the supply of land. This will eventually result in a return to equilibrium, though it will be a different equilibrium from the one previously obtained. In its essentials, this law was defined in the eighteenth century by Adam Smith.⁴ What we are speaking of is, of course, real rates, not nominal ones, which means that the law functions theoretically in an autonomous way, independently of problems of inflation. It has absolutely nothing to do with Bodin's Law.

In a situation where interest rates rise, a law such as Caesar's, with its obligation to acquire and retain a sizable proportion of landed property, prevents a return to equilibrium, the reason being that the decrease in agricultural income flowing from the rise in land prices can no longer induce sales of landed property, and capital no longer feeds into the money market. Such a law would thus make for a lasting difference between agricultural income and income from financial sources.⁵

In the early years of the Roman Empire, were conditions right for the principle of equilibrium between interest rates and the price of land to apply? Scholars have for some time been referring to the series of texts that indicate that the Roman elite's main investment arbitrage was made between land and moneylending for interest. Pliny the Younger's famous sentence *Sum*

⁴ 'The ordinary market price of land, it is to be observed, depends everywhere upon the ordinary market rate of interest' (Smith 1776: ii, ch. IV). He stresses that, as a rule, there is a preference for ground rent that justifies a difference between it and income from financial sources; the compensating mechanisms do not come into play until this difference is exceeded: 'If the rent of land should fall short of the interest of money by a greater difference, nobody would buy land, which would soon reduce its ordinary price.' This same difference existed in Antiquity; see Andreau (2001: 177–8).

⁵ I cannot understand how Lo Cascio (1978b: 201), and Andreau (2001: 192, n. 2) can believe that such a measure would have had the effect of lowering interest rates.

*quidem prope totus in praediis, aliquid tamen fenero*⁶ is just one of an exceptionally rich set of documents.⁷ No other period seems to have been better suited to illustrating the principle enunciated by Adam Smith. He even seems to have had a predecessor in Suetonius, who, writing about the increase of money that followed Octavius' conquest of Egypt, says that, the interest rate having fallen, there was a great increase in the price of land.⁸

It is manifest that Adam Smith's law, even though grounded in empiricism, is first and foremost theoretical and does not account for a far more complex economic reality.⁹ Nevertheless, I feel it is important to keep it as a point of reference and to have a clear understanding of how it works.

THE *SENATUS CONSULTUM*: TACITUS AND SUETONIUS

If we restrict ourselves to the text from Tacitus, it would appear that the *senatus consultum* was aimed only at creditors and not debtors. The only difference between it and the law *de modo credendi possidendique intra Italiam* would lie in its stipulation that a proportion of the *faenus* should be invested in land and not a proportion of the total fortune. This might lead one to take *faenus* in its most common sense: interest earned, rather than the capital on which it is earned. On this reading, the measure would have been not very coercive and its effects would have been very gradual; and one could see that senators were trying to be helpful without risking upsetting anyone's apple cart. However, the following sentence, *sed creditores in solidum appellabant*, and especially the mention a little later of *ea quae remedio quaesita, venditio et emptio*, do not fit with that interpretation, in which there is no suggestion of anyone being urged to sell; and no one, to my knowledge at least, has ever argued in favour of such a reading. It would be better to see *faenus* as having

⁶ *Ep.* III. 19.

⁷ See J. Andreau's remarks on Q. Axius at the time of Cicero, in Andreau (1978: 56; 2001: 33–40, esp. 35). Other references were identified by P. Veyne (1961: 239 (2001: 46)), and by H. Pavis d'Escurac (1977: 339). For the position of Seneca, as a large landowner and a money-lender, see his *Ep.* 2, 6; 41, 7; 87, 6. See also Tacitus, *Ann.* XIV. 53 at the end. In the realm of public finances, the alternatives were seen as similar (Pliny the Younger, *Ep.* X. 54, 1).

⁸ Suetonius, *Aug.* XLI. 2. I am in complete agreement with Andreau's understanding of this passage (1997: 212–13; 2001: 199–201), but not with that of Lo Cascio (1978a: 250): Paulus Orosius may well see this episode as a general rise in prices in response to an increase in the money supply, but Suetonius' way of describing and discussing differs from that; and it is probably better to note that every author sees things from a different economic point of view.

⁹ On economic complexity in the seventeenth and eighteenth centuries, see Grenier (1996: 182–201).

the rare meaning (attested in Tacitus, though¹⁰) of ‘the proportion of capital yielding profit through interest-bearing loans’; and in fact that is how everyone interprets it. On this point, Suetonius contradicts Tacitus, giving *duas patrimonii partes* instead of *duas faenoris partes*. If we adopt this wording, the slight difference between the principle enshrined in the *senatus consultum* and the one in the law *de modo credendi possidendique intra Italiam* disappears. The only disparity between the two measures would lie in the proportion. The *senatus consultum* would lose much of its point. All commentators assume that Suetonius was mistaken and, in preference to his *patrimonii*, accept Tacitus’ word, *faenoris*.¹¹ There is little difficulty in assuming that Suetonius, who, after his usual manner, was being brief and who, for his purpose (listing the rare generous acts of Tiberius), had no need to allude to how the affair had originated, conflated Caesar’s law and the *senatus consultum* without clearly grasping the differences between them, replacing the idea of invested capital, from the latter, with the idea of total fortune, from the former. If this assumption stands, then the sequence of events as Tacitus has it is also credible.

On the other hand, in the second part of his sentence, Suetonius informs us of something that seems to be a logical complement to the first measure stipulated in the *senatus consultum*: that debtors must immediately pay off two-thirds of their debts (*debitores totidem aeris alieni statim solverent*). Obviously, it was this measure that was of most pregnant interest to senators, as they had to make haste to call in money they had lent, so as to organize purchases of land.

Scholarly discussion on this point has a long history. In 1852, Nipperdey, in his copiously annotated edition of the *Annals*, had no hesitation in adding the end of the sentence from Suetonius (*debitores totidem aeris alieni statim solverent*) to the text of Tacitus. His first reason for doing so was that Suetonius could not have invented the second provision of the *senatus consultum*; and this is a sound argument. The wording of the rest of the text that I have just quoted in ruling out the more common meaning of *faenus* (the *sed creditores in solidum appellabant*, and the *venditio et emptio*) is also much more comprehensible if Tacitus was referring to the second provision. Later editors, cautious with regard to the possibility of a lacuna in the manuscripts (though there are some more blatant lacunae in book VI), have not adopted Nipperdey’s emendation. They do, however, quote it in their critical apparatus. Furneaux says ‘a more full statement of this decree is given in Suetonius’. Most historians who have studied or recounted the crisis accept that the *senatus consultum* did contain these two provisions.¹²

¹⁰ Tacitus, *Hist.* I. 20 and presumably also *Ann.* XIV. 53, 6; 55, 5.

¹¹ All except Mrozek (2001), who argues that, in Tacitus, *faenoris* means property in its entirety, thus equating to *patrimonium* in Suetonius. On this reading, the *senatus consultum* would represent a strengthening of Caesar’s law. This proposition strikes me as unsustainable.

¹² Latterly, Duncan Jones (1994: 23), Lo Cascio (1978a), and Andreau (2001) mention only the first provision of the *senatus consultum*. Frank’s position was unique: he too made no

In 1987, R. Wolters revisited in his own original way all these arguments; and his detailed exposition of the sequence of events carries conviction. As he says, the passages in Suetonius and Cassius Dio, all in all, incline one to read Tacitus' *Ad hoc* as referring in fact to the intention of the *senatus consultum*, and the *nec res expediretur* in Suetonius confirms the *remedio quaesita* in Tacitus. The stages of the crisis happened as follows: the law *de modo credendi possidendique intra Italiam* was revived; loans were called in; this set off the crisis of *inopia nummorum*; the *senatus consultum*, an attempt to address the crisis, worsened it; and eventually there came the offer of free loans by Tiberius.

It would, of course, be nice to know what happened when the law was first passed in Caesar's day and how such dramatic consequences were avoided. But we have no evidence on that matter, not even on the date of its promulgation. Nor do we know if it was accompanied by other measures.¹³ Manifestly, however, there is no measure by Caesar that is consistent with a demand for immediate partial repayment of debts. On the contrary, Caesar partially abolished them and facilitated direct transfer of goods to creditors in conditions acceptable to debtors.¹⁴ What is also certain is that circumstances were then very different from those obtaining at the time of Tiberius. In AD 33, economic life was relatively undisturbed, the sole disruptive element being, according to Tacitus, a glut in the *fiscus* or the *aerarium* caused by the proceeds from selling off the property of those sentenced under the *maiestas* laws (17, 1). All Caesar's measures had the very different aim of countering the effects of the civil war and the fears it had given rise to. Interest rates were high because of uncertainty about repayments; it is likely that hoarding money was widespread. Much land belonging to victims of the proscription or the civil war must have been up for sale. In short, given such conditions, the effects of the measure cannot be surmised as accurately as at the time of Tiberius.

THE FORESEEABLE CONSEQUENCES AND THE PROBABLE OBJECTIVES OF THE *SENATUS CONSULTUM*

The social group affected by the crisis habitually ran up debts on a grand scale. Even when a reimbursement fell due, many debtors availed themselves of the *versura*—that is to say, in order to pay they could contract another debt or else could have the unpaid interest counted into the renewal of the loan, a practice

mention of the second, either in 1935 or in (1959: v. 32–5), despite which, in the latter work, he reproduces and translates Nipperdey's text!

¹³ Frederiksen (1966) does not commit himself on the exact date of the law. Moreover, he wrongly states that Tacitus' text implies that the law entailed a limit on interest rates.

¹⁴ Frederiksen (1966).

that was attractive for borrowers and ultimately very advantageous for creditors.¹⁵ Procedures applying in debt transfers, the frequency of which Jean Andreau has recently brought to our attention again, are also well known.¹⁶ Debts, by being sold on to third parties or credit brokers and being passed from hand to hand, became a kind of token currency. Whatever the previous economic conditions may have been, the sudden calling-in of debts and the immobilization of money with land purchases in prospect were bound to set off an immediate cash-flow crisis. To explain this, there is no need to argue, as is often done, that it must have happened because of a particular economic or financial context. Andreau says: 'The mechanism would seize up as soon as a payment or debt crisis occurred.'¹⁷ But that is a commutative statement, which could just as easily be expressed the other way round: as soon as the mechanisms just outlined seized up, a cash-flow crisis would develop.

It would be incorrect to assume that the *senatus consultum* was a relatively mild measure compared with the law *de modo credendi possidendique intra Italiam*. The result of the calling-in of two-thirds of debts was that debtors found themselves in very great difficulties. But, much more importantly, the *senatus consultum* put them in a worse situation by threatening them with harsher legal consequences. Until then, the risks they ran with regard to their creditors were limited to termination of their contracts under contract law, involving a procedure that could be slow and fraught with difficulties. After the *senatus consultum*, they were additionally in breach of a legislative measure, that could have consequences under criminal law.

As for the first provision of the *senatus consultum*, the obligation to invest two-thirds of the *faenus* in land, my impression is that its theoretical effects have not been accurately assessed. The fact is that the two-thirds of debt transformed into new land purchases were added to the acreage already owned. For instance, anyone who had kept only 33 per cent of his fortune in land and had put 67 per cent into loans, now had 77.6 per cent of his fortune in land. Someone who already owned 50 per cent in land now had 83.3 per cent, and so on.

Perhaps it can be agreed that the first provision of the *senatus consultum* affected only debts that had actually been paid and that two-thirds of two-thirds of debt were invested in land. The outcomes, though not quite so unrealistic, are still rather stark: someone with 33 per cent of land ended up with nearly 63 per cent; people who previously had had 50 per cent now had more than 72 per cent; people who had 66 per cent before now had

¹⁵ See Wolters (1987: 32). Also Wille (1984), who has shown how people got round the various prohibitions.

¹⁶ Andreau (1997: 262; 2001: 44–5). [See more recently Harris (2006) and Andreau's *reservations* (2010: 158–60).]

¹⁷ Andreau (2001: 45).

81.4 per cent, and so on. A possible solution is to accept that the measure applied only to those who exceeded the limit laid down by the law *de modo credendi possidendique intra Italiam*.¹⁸ However, Tacitus says clearly *quisque...collocaret*. All things considered, the *senatus consultum* could not have brought about a noticeable relaxation of the provisions in Caesar's law and have produced a convenient transitional situation.

Even so, in the *senatus consultum*, at least in its most straightforward interpretation, there is one theoretically attractive aspect that presumably reveals the intention of the legislator: the formal equivalence between recovered debts and purchases of land. Supply of land (owing to the need to pay off debts) was equal to demand (owing to the obligation to buy exactly the acreage of land equivalent to the value of debts paid). Supply and demand being equal, there was no effect on prices and, consequently, no change in the equilibrium of interest rates and agricultural income. The desired change in the composition of family fortunes would have come about naturally, so to speak: those who were lending too much would have owned more land; and the situation of those in debt would have been normalized by property transfers. Conditions favourable to the working of the law *de modo credendi...* would appear to have arisen through the functioning of economic principles of which the Romans were aware.

Unfortunately, there was no market to enable such good intentions to be translated into reality. This could have happened only if there had been a completely transparent land market, a thing that would not exist even today. It was impossible for landowners in ancient Italy to have access to a general fund of information on opportunities for selling. Debtors could not artificially slice up their land to sell off the exact amount required for reimbursing the specified two-thirds of what they owed, a sum that, in any case, was not necessarily owing to a single creditor. Nor could such transactions happen as quickly as, say, the sale of a portfolio of shares or Adam Smith's exchange of a beaver for two deer. Conditions constituting the land market were very different from those affecting barter among early humankind, the workings of modern stock exchanges, or even business in the *Janus medius*.¹⁹

In addition, decisions made by purchasers did not depend solely on financial conditions; the topography of the land on offer, what produce it could provide, the nature and quality of its appointments, these and many other factors had to be assessed before a decision was made to acquire property that was anything but interchangeable with other properties. And, lastly, there were very few potential buyers who had enough ready cash to purchase land on the spot. Moneylenders though they were, most of them had to call in some

¹⁸ This idea was hypothetically advanced by Lo Cascio (1978a: 246).

¹⁹ See also, for discussion along the same lines as the preceding paragraphs, Wolters (1987: 40); and, on the absence of a land market, Finley (1985: 118–19).

of what was owed to them before they could make an offer. Pliny the Younger can be seen considering acting in this way, and also borrowing, when he is contemplating buying the estate adjoining his own at *Tifernum Tiberinum*. Cicero, too, in his day, had got himself deeply into debt through buying his house on the Palatine.²⁰

In short, the idea of generalized exchange that we can see in the *senatus consultum* was in fact unachievable, for buyers and sellers alike. This example of a purely theoretical and arithmetical notion, leading a member of the Senate or an adviser of Tiberius to suggest it as a way of solving the crisis, seems to me to be an extreme instance of what Andreau calls 'the concept of a system of financial relations functioning autonomously, like a mechanism'.²¹ There were no doubt personages who were looked on as experts in financial things, whose advice the head of state could seek before taking a decision affecting the economy, state finances, and the circulation of money. One of them must have been Nerva (who Cassius Dio says starved himself to death because Tiberius ignored his warnings when reactivating Caesar's law). Having foreseen the risks associated with the reactivation, he killed himself because he had failed to convince Tiberius, who seems to have taken advice on this matter that differed from that of this great jurist-cum-friend.²² Other experts, from a very different school of thought, more wedded to the theoretical abstractions of arithmetic, made things worse. One would dearly like to know whether Nerva was still alive when the *senatus consultum* was promulgated and perhaps took it as the unkindest cut of all. However, Tiberius' loans without interest, a good solution, were also recommended by these same financial experts. Crifó sees this as something of a posthumous vindication of Nerva.²³

There was now a dearth of lenders. In my view, this is how we should read the sentence *faeneratores omnem pecuniam mercandis agris condiderant* (Tacitus, *Ann.* VI. 17, 3): those whose usual practice was to lend money had instead saved all their funds to buy land. Furthermore, the fall in the price of estates cast doubt upon guarantees that might be given to lenders. There is no need to impute ulterior motives to the *faeneratores*, to suspect them of counting on profiting from an even larger drop in land prices,²⁴ or of concealing their wealth so as to avoid being assessed.²⁵ The drying-up of loans caused an economic system that functioned on borrowing to seize up. Tiberius' solution derived directly from an understanding of this very point;

²⁰ Pliny the Younger, *Ep.* III. 19, 8; Cicero, *Fam.* V. 6, 3.

²¹ Andreau (2001: 200–2; see 1997: 213)).

²² Cassius Dio's comment on the crisis focuses on Nerva's suicide.

²³ Crifó (1969: 28–31).

²⁴ This was the interpretation shared by Nipperdey, Furneaux, and Tenney Frank.

²⁵ Wolters (1987: 47) (who seems to me to construe *mercandis agris* as being linked to *pecuniam* and not to *condiderant*, a reading for which parallels do in fact exist: Tacitus, *Ann.* XV. 43, *subsidia reprimendis ignibus*, etc.).

and, in Tacitus' view, it was the resumption of lending that marked the end of the crisis: *sic refecta fides et paulatim privati quoque creditores reperti* (VI. 17, 6).

WHAT LESSONS ARE TO BE DRAWN FROM THE CRISIS OF AD 33?

The crisis is a self-contained event, from which no lessons applicable to the longer term or the general economic situation can be drawn. It should be noted that none of the sources that mention it speaks of exorbitant interest rates or of *inopia nummorum* at the time it began.²⁶ As Rodewald has aptly observed,²⁷ paragraphs 16, 2–3 in Tacitus, a brief reminder of reactions against usury, constitute an actual digression (a quite common procedure for Tacitus)²⁸ and do not give grounds for believing that there was a legal limit on the interest rate. Any evidence about the economy and public finances during the reign of Tiberius has to come from the extraneous information in our source texts rather than from their account of the crisis proper.

Tacitus, by way of explanation of the *inopia nummorum*, speaks first of the simultaneous calling-in of debts, then of the moneys from the selling-off of the property of those sentenced accumulating in the coffers of the emperor and the state (17, 1). This being a record of fact, it deserves to be treated with the consideration afforded to all such things in Tacitus. But if taken to be a cause of the crisis of AD 33, it is a mere interpretation of the facts by Tacitus and we can treat it as nothing more than an interesting hypothesis. The symmetry he establishes between the two causes is actually out of kilter with the chronology. Confiscations began at the latest in AD 24, nine years before the crisis, so cannot have been the cause of a sudden and violent disturbance. Nor, as I have said, were they a necessary condition of it.

The amassing of money by the state can be seen as only part of the external evidence for a probable phase of high interest rates towards the end of the reign of Tiberius. In view of the vast sums he is said to have left in the state coffers at his death (so vast, in fact, as to be barely credible), it would appear that he spent less, and thus contributed less to the money supply, than Augustus or his own successors.²⁹ This is the background against which we should read Tacitus' comment on the accumulation of money from the sale of the condemned men's assets.³⁰ From the numismatic point of view, it was easy

²⁶ A point made by Wolters (1987: 37).

²⁷ Rodewald (1976: 3).

²⁸ See, for example, in book VI, 11, an 'archaeology' of the city's *praefectura*, brought in by the mere mention of the death of the pontifex Piso and a comment on his personality.

²⁹ Suetonius, *Cal.* XXXVII. 3; Cassius Dio, LIX. 2, 6.

³⁰ De Romanis (1982–7: 208 (De Romanis and Tchernia 1997: 126)) adds to the causes of state accumulation of money the high duties paid on trade with the East.

for Rodewald, arguing against Tenney Frank, to demonstrate that it is not possible to deduce from the number of issues the number of coins minted. Nowadays, however, the procedures of numismatists have changed: they count the number of dies there were and try to calculate how many coins could be struck from a single die. The figure is uncertain and subject to wild variations; and the calculations have aroused spirited disagreements.³¹ Nevertheless, even taking account of these uncertainties, it does appear that Tiberius minted less money than others—for instance, Claudius.³² There was a shrinking of the money supply, the extent of which cannot, however, be evaluated.

The rise in interest rates that was the inevitable consequence of this derived from a growing scarcity of money for lending.³³ Whenever there is less money to lend, the price of it rises, though this does not imply that, as a proportion of total fortunes, more is being lent. An increase in financial income as against agricultural income has the counter-effect of correcting the opposite situation. It is a fact that, initially, scarcity of money reduces the amount available for lending. It is not until a second stage that landowners, once interest rates have risen, shift to financial investment. In the case of the monetary tightening consequent on the treasury's amassing the proceeds from confiscation and sale of the assets of the men condemned, the flooding of the market with large acreages helped to bring down the price of land and thereby, if we look at the situation in terms of Adam Smith's law, to increase agricultural income and hasten the return to equilibrium.

Admittedly, this cannot happen without economic difficulties, which may be severe. But a crisis brought about by a gradual decrease in money circulating is also gradual and has consequences over time. The crisis of AD 33 was not like that. The suddenness with which it started reveals nothing other than what Tacitus says: figments of imagination from the *delatores*; a poor decision by Tiberius; and panic among property-owners.

Of all the evidence on the crisis that one can gather, the clue that is most interesting is the switch to financial investment before the crisis itself. This is a strong hint that financial profits were increasing. The discrepancy between

³¹ See the survey by Howgego (1995:, 30–3), and F. de Callatay's discussion (1995).

³² Burgers (2001).

³³ One piece of evidence for an interest rate of 12% at Puteoli in AD 37–8 may be based on a hypothesis that, though attractive, is debatable: it was put forward by Casson (1980) on the matter of the debts of C. Novius Eunus as recorded in the Murecine tablets (*TPSulp.* 52 and 67 in the edition by Camodeca (1999)). The fact is that such a loan to a trader of Puteoli is not necessarily representative of the most current interest rate at the time or in other areas of activity. I ignore the high interest rates that helped cause the uprising of Florus and Sacrovir in Gaul in AD 21 (Tacitus, *Ann.* III. 40); to do otherwise would be to assume there was uniformity of interest rates throughout the Empire, which was not the case: *Dig.* XIII. 4, 3, *pecuniarum quoque licet videatur una et eadem potestas ubique esse, tamen aliis locis facilius et levibus usuris inveniuntur, aliis difficilior et gravibus usuris*, and Andreau (2001: 180–1).

such profits and agricultural income was sufficiently clear-cut and lasting for the return to equilibrium, if it had already taken place, to have occurred only after a substantial movement of capital. As we have seen, Suetonius and Cassius Dio maintain that, after the annexation of Egypt and the consequent influx of wealth to Rome, the interest rate had fallen from 12 per cent to 4 per cent and there had been a rapid shift towards buying up land.³⁴ Neither of these sources gives grounds for assuming that this shift lasted for very long or that it brought about structural changes. The investment switches in the other direction, which resulted in the AD 33 situation described by Tacitus, would appear to have been more lasting in their effects.

Some time ago, I suggested that bottomry loans in the India trade may have played a decisive role in such matters.³⁵ The involvement of Italian traders in this long-distance trading, attested by several inscriptions found in the Egyptian desert³⁶ and the hoards of *denarii* of Gaius and Lucius Caesar discovered in southern India, does appear to have begun about the time of the transition to the common era. The sums of money invested were substantial; and the trade definitely relied on the *pecunia traiectica*.³⁷ Such loans for seaborne trade were, as we know, subject to great risks, as they functioned also as insurance; and they had extremely high interest rates, which, in other activities, would have been seen as exorbitantly usurious. They did not directly affect the factors making for the equilibrium between land prices and interest rates, as they were calculated on a different basis. They did, however, influence the workings of that system, because they withdrew capital from it. The funds tied up in this way were not sufficient to prevent the system from functioning, for the good reason that they were being used in the high-risk area, in which no one would invest his whole fortune. The result of all these conditions was that loans for seaborne trade could cause a rise in standard interest rates, while at the same time, in a quite autonomous way, promoting the lasting attractiveness of this different mode of financial profit, especially given that they were underwriting a trade that must have been expanding at the time of Tiberius. In any investigation of how fortunes were apportioned, these loans were obviously seen as contributing to a general growth in debt.

An objection to this idea would be that lenders, constrained to rejig their finances towards real estate, could have called in loans from trading ventures and not from other landowners. The crisis of AD 33 either would never have happened or would have affected a quite different sector of the economy. This objection would be conclusive, had not loans for seaborne trade been binding for the whole duration of a voyage, which in this context definitely meant an

³⁴ Suetonius, *Aug.* XLI. 1; Cassius Dio, *LI.* 21, 5.

³⁵ See p. 247.

³⁶ See De Romanis (1996a: 186–7, 203–12, 241–59). [See also *pp.* 42–8.]

³⁷ For a useful survey of current scholarship on the matter of loans for seaborne trade, see De Salvo (1992: 336–43).

amphoteroploun, from a ship's departure from Italy until it returned.³⁸ Given that we know the sailing dates of ships out of Egyptian ports bound for India (about mid-July) and those of ships returning from Indian ports (in December),³⁹ it seems plausible that the round trip, allowing for the delays entailed in multiple loadings and unloadings of goods, would have taken a good fourteen or fifteen months. Senators, having to wait all that time to recoup funds that would put their finances in order, found themselves dangerously close to the eighteen-month limit stipulated. A further contributory factor was the risk inherent in such loans; a lender was never certain of being reimbursed until the end of a voyage. Under these circumstances, it is understandable that *faeneratores* looked to the other component of their loans and tried to call in as many of these as possible, since the others were for the time being out of reach. This explains why lenders were so insistent on getting back what they were owed in its entirety (17, 2: *sed creditores in solidum appellabant*). There is a strong chance that the imbalance in fortunes during the later years of Tiberius bears some relation to the excessive increase in lending for seaborne trade.

This is perhaps one of the conclusions in the fields of economic and social history to be drawn from the evidence in our source texts extraneous to the crisis. There is another conclusion, which has to do with the social groups affected by it. As Claude Nicolet says: 'This was no conflict between property-owning classes and non-property-owning classes; it was a problem of debt-repayments among property-owners.'⁴⁰ At the time, this class appears to have included, at its extremities, two clearly different categories. There were, on the one hand, people who had made many loans, something that did not prevent them from being large landowners. Their activities seem to have been free of all financial constraint. It was these men, presumably as well as representatives of an intermediary group, who felt obliged to comply with the measure and attempted to reorder their finances. This had adverse effects on another group, the members of which were mostly net debtors who must have found it difficult to get out of that situation. We must include in this group those senators whom Tiberius at the start of his reign had helped maintain their rank, as well as those he refused to help because their difficulties were the result of their own extravagance.⁴¹ The debts mask the true financial situation, and the social orders did not coincide exactly with categories of wealth, especially since the highest placed in the orders were subject to more social constraints on their expenditure.⁴²

³⁸ Or perhaps also from Alexandria to Alexandria, via agents. But, in that case, the funds had then to be sent back to Italy.

³⁹ Pliny, VI. 105–6. ⁴⁰ Nicolet (1988: 266–7).

⁴¹ Velleius Paterculus, II. 129, 3; Tacitus, *Ann.* I. 75; II. 37–8; 48; Suetonius, *Tib.* XLVII. 2.

⁴² On this, see the various studies by De Romanis (1982–7: 203–10; De Romanis and Tchernia (1997: 121–8)).

In conclusion, I come back to the evidence afforded by the crisis of AD 33 for the existence, first, of Roman economic thought, the limits of which have been very well mapped by Jean Andreau,⁴³ and, secondly, of experts in the subject who might be expected to advise the emperor with varying degrees of success. In this instance, as in most, they reacted to a crisis that was already acute. The decisions taken by Tiberius do not mean he was applying an ongoing economic policy.

A little over seventy years later, Trajan required that a third of the fortune owned by candidates for magistracies consist of land inside Italy. This shows that, by that time, Caesar's law had definitively lapsed. According to the *Historia Augusta*, Marcus Aurelius enacted an analogous measure aimed more directly at provincial senators.⁴⁴ Neither of these measures, which were much more restricted in scope than had been the case in AD 33 and were presumably linked to the rise in numbers of provincial senators and the extent of their estates outside Italy, proved to be disruptive, though Pliny tells us that Trajan's decision caused a rise in the price of land in Italy, especially around Rome, and a drop in the provinces. Trajan's intention, still according to Pliny, was to prevent magistrates from looking on Rome not as their *patria* but as merely somewhere to lodge, as though they were just transients.⁴⁵ Naturally, Trajan's ruling has been interpreted differently, as an economic measure indicative of a context, by Tenney Frank, for instance, who saw its aim as being the fostering of Italian agriculture.⁴⁶ The idea that an upright citizen must own a goodly proportion of the earth that his city stands on, like the idea that it is better for a well-born man not to grow rich solely through usury, were, however, integral to men's minds in Antiquity. So they should not be ruled out as having contributed to Tiberius' and Trajan's motives, and replaced by the urge, which springs eternal in modern historians, to discover economic policies or behaviours lurking behind hypocritical self-righteousness.⁴⁷

⁴³ Andreau (2001: 200–2).

⁴⁴ Pliny the Younger, *Ep.* VI. 19; SHA, *Marc.* 11, 8.

⁴⁵ *urbem Italiamque non pro patria sed pro hospitio aut stabulo quasi peregrinantes habere.*

⁴⁶ Frank (1959: v. 66, n. 15, 297). Finley (1985: 119–20), has taken issue with this type of interpretation.

⁴⁷ This text benefited from conversations, unfinished alas, with my colleague Louis-André Gérard-Varet. The loss of a man with such a fine intellect, so learned and so warm-hearted, taken from us before his time, is a continuing source of regret.

Staple Provisions for Rome

Problems of Quantification

GRAIN

The quantity of grain imported to Rome is evidence so basic that all historians with an interest in the Roman economy have had something to say about it. They have all drawn on the same sources, which are few in number, and their arguments have always been similar in nature. Either they take as their starting point the four texts that may allude to Rome's total consumption and discuss how to interpret them (this I call Approach A); or they start from a figure for the population of Rome, which they multiply by a number representing per capita consumption, arrived at from the sparse data available on rations and from computation of a plausible intake of calories (Approach B). In the latter case, care should be taken not to use a precalculated figure for the population devised by dividing a sum of total consumption by an individual ration presumed to be normal. This was one of the three methods used by Beloch (1886: 392–412) in his calculations of Rome's population. With Rome, the intersection of demography and consumption is one that affords great scope for circular reasoning.

Approach A

The textual evidence is so meagre that it occupies little space.

1. Flavius Josephus, *Bell. Iud.* II. 386: Egypt supplies Rome with enough grain for four months—in other words, a third of its needs;
2. *Epit. de Caesaribus*, I. 6: Egypt supplies Rome with 20 million *modii* of grain per annum.

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3. SHA, Sev. 23, 2: *moriens septem annorum canonem, ita ut cottidiana septuaginta quinque milia modium expendi possent, reliquit.*
4. a scholium to Lucan, *Pharsalia*, I. 318: daily consumption of 80,000 *modii* in the last years of the Republic.

Sources 1 and 2

The figure for supplies derived from Egypt (Source 2) multiplied by three (in accordance with Source 1) amounts to annual deliveries to Rome of 60 million *modii*—that is to say, 527 million litres or about 390,000–420,000 tonnes, depending on the density of the grain.¹

This way of doing things was dismissed by Beloch, with every semblance of good sense and in such a devastating way (*Ein so unmethodisches Verfahren bedarf keiner Widerlegung* ('Such an unmethodical approach is beneath refutation')) that good scholars have tended to eschew it.² The fact is that it brings together two texts, one of which may be reliable, since it is by an author from the Flavian period who was a contemporary of the events he recounts, while the other one is by an epitomator writing three centuries later. Beloch adds that the total of 60 million *modii* would correspond to a population of 2 million, which he finds preposterous. These criticisms could be strengthened by an argument drawn from Flavius Josephus, *Bell. Iud.* II. 383: Africa (not counting Egypt) feeds Rome's plebs for eight months. Taken in conjunction with Source 1, this passage was once taken to exclude any supply of grain unless it came from Egypt or Africa, which was implausible. What it really dealt with, though, according to Federico De Romanis, was eight months' worth of the free grain doled out to the plebs and not eight months of the total grain supply.³ Hence, that text is no longer of relevance.

Sources 3 and 4

Beloch put more faith in Source 3, the text from the SHA, from which he took it that *canon* was a reference to Rome's total consumption, which is not the usual meaning of it. The figure of 75,000 *modii* per day, equivalent to 27,375,000 *modii* per year, is conveniently close to that given in the scholium to Lucan (Source 4). Beloch extrapolated from it to estimate the population of Rome at about 760,000, allowing for an average consumption of 36 *modii* per person per year. But the notion of stocking up in advance seven years of

¹ One *modius* = approximately 8.8 litres, or 6.5–7 kilograms, of grain.

² See discussion in Rickman (1980b: 231–5).

³ De Romanis (1996c). This interpretation was accepted and defended by Viriouv (1995b: n. 27. [De Romanis reprinted his demonstration (2003a: 700–2); and his translation of τὸ κατὰ τὴν 'Ρώμην πληθὺς should be seen as authoritative.]

Rome's consumption is impossibly absurd. The first part of the sentence cannot be construed as having a real meaning.

Federico De Romanis has recently suggested a quite different reading of Source 3, one that makes the whole text clear and coherent. Instead of the traditional interpretation of *ita ut* (given in Piganiol's paraphrase⁴ as 'Severus was said to have left grain enough for seven years at the rate of 75,000 *modii* per day'), De Romanis, following B. Sirks,⁵ sees each element of the sentence as using a different system of calculation, the correspondence between them being indicated by *ita ut*. From that it would follow that the second element must be referring to a daily amount over the course of a year: the amount that could have been given out over a year if the amount specified in the first part of the sentence had been distributed during that time. This, however, raises a difficulty: the figure for the possible distribution, 27,375,000 *modii*, implied by the second element of the sentence, equating to seven times the annual *canon*, ought to be divisible by seven, which is not the case. De Romanis gets round this by suggesting that *LXXV* should be changed to *CLXXV*, a figure that is divisible by seven and also lets us read the extremely high *canon* in the first element of the sentence as referring to a contribution from the provinces and the imperial estates that was seven times greater than the requirements of the free dole-out, five *modii* per month for each of the 150,000 people entitled to it. The total, 63 million *modii*, comes out as roughly equivalent to Rome's total consumption.

In justifying this approach, De Romanis brings this figure of 63 million *modii* closer to the sum we arrive at if we take Sources 1 and 2 together. This would mean that either the population or their consumption per capita was far in excess of Beloch's estimates. The recipients of the grain dole were allotted 5 *modii* per month, which is generally assumed to have been intended for their whole household. It is this same amount that Seneca says in a letter⁶ was given to a slave who acted in tragedies and who also received 4 denarii a month. In my view, he must have been a slave with a very generous *peculium*, even if we compare him just with Seneca's second example, a few lines later, of another slave who was also an actor but who received only a *diurnum*. In fact, there is, to my mind, nothing to prove that the first actor's 5 *modii* per month were the sum total of his daily allowance, rather than being a complement in kind of his 4 denarii. Consumption of 5 *modii* per month, which is equivalent to 35 kilograms, would provide 3,900 calories per day,⁷ an extremely high figure for even a modern adult that cannot be extrapolated to the whole population, including women and children, even if we make allowance, as De Romanis rightly does, for the privileged food supply enjoyed by the inhabitants of the

⁴ Piganiol (1972: 8–9, n. 4).

⁵ Sirks (1991b).

⁶ *Ep.* 80, 7.

⁷ It should be noted that Duncan-Jones (1974: 147), with a different calculation based on the calorific value of bread, arrives at 3,000–3,500 calories per day, which he sees as close to 'modern ideals of 3,300 calories per day for male adults'.

capital. Their diet, after all, did not consist solely of grain; and they also drank a fair amount of wine.

In fact, if we accept De Romanis's subtle argument and the consistency of the figures given by the adjustment he proposes, nothing obliges us to infer from the second element of the sentence anything more than a mere possibility, with no necessarily close bearing on the real world, a virtual consumption implicitly seen as particularly high, which nothing suggests represented real consumption. This is exactly what is expressed in the Latin: *expendi possent* means there was a possibility but says nothing about that possibility ever being realized. There is no reason to doubt that tax grain was for sale in other cities where demand for it existed or that some was stockpiled for the following year. All in all, De Romanis's interpretation is tantamount to eliminating the SHA text (Source 3) from the evidence relevant to Rome's total consumption, if not from the evidence on the Empire's stocks.⁸

Approach B

In recent years, differing estimates of the population of Rome have substantially converged; nowadays few scholars would dispute a figure in the range of 800,000–1,200,000. The difference between these two extremes (amounting to 50 per cent of the first of them) is still quite large. The most reliable figure does appear to be the number of recipients of the grain dole, which may be supposed to mean all adult male citizens, in other words 320,000, until Caesar revised the lists in 46 BC. One question this raises is whether the number of citizens of Rome was not particularly inflated at that time, the grain dole itself being the very reason for this, whether many non-citizens might not have infiltrated the ranks of those entitled to grain, in short whether the same figure turns up under Augustus. This last point depends on our knowing who were the 320,000 recipients of a *congiarium* in 5 BC (only adult males, or all males including children?), and on the parallel question whether the 200,000 who received public grain in 2 BC represented the whole population of plebs or only a part of it previously limited by Augustus.⁹ This is a significant difference. The next thing is to imagine the structure of Rome's population, which probably had a large preponderance of men, given the preference for males at birth, a consequence of the accepted practice of exposure of newborn children.¹⁰ Then we would require an average ration of grain per inhabitant;

⁸ As for the scholium to Lucan, De Romanis suspects it might have derived from the SHA manuscripts.

⁹ Lo Cascio (1997) prefers interpretations resulting in the lowest figures, Virlouvet (1995a) those resulting in the highest figures.

¹⁰ See the important article by Harris (1994).

and, on that matter, too, there are wide differences of opinion: P. Garnsey sets the minimum calories for the Roman population at 1,745 calories per day, which would not be very nourishing;¹¹ L. Cracco Ruggini arrives at a more reasonable figure of 2,500 calories per day;¹² and, as we have seen, De Romanis would set it a fair bit higher.¹³

We do have evidence on grain consumption in the Roman world, but not for Rome itself, if we accept that the grain dole of 5 *modii* per month was not intended solely for individuals. In the second century BC, a Roman soldier's ration was 3 *modii* per month.¹⁴ At roughly the same period, Cato's slaves were fed according to the work they did: 4–4.5 *modii* for labourers; 3 for foremen, overseers, and shepherds.¹⁵ During the Empire, the traditional ration for a labourer in Egypt was 1 artaba, equivalent to 39.5 litres or about 4.5 *modii*.¹⁶ But was this meant only for his personal consumption? Such relatively consistent data show the disparity there could be among different rations for different people. The type of work they did is not the only point to consider; there were possible differences in other sources of food to which they might have had access. However, a monthly ration of 4–4.5 *modii*, corresponding to 3,100–3,500 calories per day, does seem a plausible amount for adult male labourers, who were the greatest consumers of grain.

Clearly, this figure cannot be extrapolated to a whole population. Here, too, though, any calculation of average required calories would also require some knowledge of how the population was structured. And one would have to take account, as Lo Cascio does,¹⁷ of other foods consumed. In fact, estimates proposed for Rome's grain requirements in recent years derive more from impressions of what seems plausible (while being careful not to depart too much from Beloch's canonical 36 *modii* per year) than from calculations that, if taken to their logical result, might merely mask the same uncertainty.¹⁸ Nevertheless, I transcribe in Table 10.1, for the interest of readers, two modern estimates of what constitutes a desirable level of nourishment, one from a French organization, the other from India. If we assume, as I do, that there was an imbalance in the population (females 40 per cent, males 60 per cent), with adults accounting for about 65 per cent of it, and if we take the highest Indian figures, we arrive at a potential total consumption of up to 2,900 calories per day. This falls close enough to the oft-quoted canonical figure of a litre of grain per person per day, giving roughly 2,700 calories. But it also adds up to 42 *modii* per annum,

¹¹ Garnsey (1983; 1988: 231).

¹² Cracco Ruggini (1985).

¹³ On these difficulties, see Foxhall and Forbes (1982); Gallant (1991: 62–8).

¹⁴ Polybius (VI. 39, 12–14) puts it differently: two-thirds of a *medimnus* per foot soldier. Depending on what capacity is accepted for the *medimnus*, conversions vary; some say 4 *modii*. Walbank (1957: i. 722) I find reliable.

¹⁵ Cato, *Agr.* 56.

¹⁶ Cuvigny (1996: 141).

¹⁷ Lo Cascio (1990: 232–8).

¹⁸ See Rickman (1980b: 10); Garnsey (1983: 118 and n. 3); Cracco Ruggini (1985: 229).

Table 10.1. Recommended daily calories, according to European and Indian research

Fondation française pour la nutrition (1981)		Indian Council of Medical Research (1988)		
Description	Calories	Description	Activity	Calories
Adult male	2,700	Adult male	Very active (heavy)	3,800
			Moderately active	2,875
			Sedentary	2,425
Adult female	2,000	Adult female	Very active	2,825
			Moderately active	2,225
			Sedentary	1,875
Child 1–3 years	1,360	Child 1–3 years		
Child 4–6 years	1,830	Child 4–6 years		1,690
Child 7–9 years	2,190	Child 7–9 years		1,950
Child 10–12 years	2,600 (M)	Child 10–12 years		2,190 (M)
	2,350 (F)			1,970 (F)
		Child 13–15 years		2,450 (M)
				2,060 (F)
Child 12–19 years	3,000 (M)	Child 16–18 years		2,640 (M)
	2,400 (F)			2,060 (F)

which is significantly higher than the figures given by Beloch, Garnsey, and Lo Cascio, and somewhat higher than Rickman's and Cracco Ruggini's.

In an area fraught with such indeterminate variables (which we would be mistaken to assume had remained unchanged over a period of two and a half centuries), I am a great believer in using ranges of figures. That way, we can be almost certain of bracketing the target of Rome's grain consumption. At the lower end of the scale, there is Garnsey's calculation of consumption and Beloch's cautious estimate of population at 800,000, giving altogether about 24 million *modii* per annum (meaning some 170,000 tons). And, at the other end, we have a calculation based on the 42 *modii* per annum, which I have just considered to be a maximum, and on a high population in the order of 1,200,000. This would give about 50 million *modii* per annum—that is to say, more than double the other figure. Wide as this discrepancy may be, we can still work with such evidence.

Sources 1 and 2 in Approach A and Wastage during Storage

We can perhaps try to make a little progress by backtracking to the sources quoted at the beginning. Beloch was certainly wise to mistrust the epitomator of *De Caesaribus* and to have no truck with any method combining two sources separated by more than three centuries. However, the problem cannot be posited quite in these terms, for the very reason that the author of *De Caesaribus* was an epitomator. There are two questions: how much faith can we put in the source that he was following, possibly accurately? And: what

period does it date from? G. Geraci recently used various arguments to place the source of the *Epitome* in the Augustan period and to support the figure of 60 million *modii* criticized by Beloch.¹⁹

If we follow Geraci's arguments, it is true that the figure of 60 million *modii* lies well outside the range defined above. It should be remembered, however, that the 60 million would not represent the city's consumption but, at most, the amount of grain arriving in Rome. Grains are sensitive foodstuffs; and, however careful Roman architects were in designing *horrea* to meet this problem, however aware modern historians are of the fact that grain in the husk ran fewer risks than grain without it, a percentage of wastage was inevitable during the period of storing. In any event, grains lose weight as they dry out; but the depredations of small animals and insects, as well as the hazards from the possibility of fermentation, are much greater. Grain affected by dampness during a long sea voyage will be even more perishable. In the eighteenth century, Duhamel de Monceau wrote two books to promote ways of preserving grain, in particular dry heating (which was never properly put into practice), and to persuade his fellow citizens that they could and should stockpile wheat. It seems clear that this entailed some setbacks: though he gathered examples of excellent preservation, he also received letters telling of great damage done. In the second of his treatises,²⁰ he wrote: 'Someone from the Caux country in Normandy wrote to tell me that, by early September 1764, he had already lost a quarter of the grain he harvested in 1763, because of the hordes of honeycomb moths which had attached themselves to it.'

Geraci assumes that, in the ancient world, there would have been a wastage rate close to 20 per cent; Rickman²¹ goes as high as a quarter or a third.²² I do not know how they arrived at these figures. It would appear difficult, in fact, to devise an average rate, given that outcomes must be highly variable from year to year, since they depend not only on modes of storage but also on climatic conditions and the quality of the grain stored. At any rate, we can readily agree that, if 60 million *modii* of grain did reach Rome each year, most of the time there would not have been more than 50 million fit for human consumption. This is especially the case since storing was a constant source of worry and often there was still grain from the previous year's crop left to be consumed.

¹⁹ Geraci (1994: 282–5) [also in (2003: 633–4). Geraci sees the immediate source of this passage of the *Epitome* as a Suetonius auctus and presents very convincing evidence].

²⁰ Duhamel de Monceau (1765: pp. xix–xx). I thank Jean-Yves Grenier for all the valuable information he provided me with on these matters.

²¹ Rickman (1991). See also Garnsey (1991: 78). [Geraci (2003: 635–9) has given another detailed account of the problems of storing wheat, and has again defended the figure of 60 million *modii* of grain delivered to Rome. I could also quote Galiani (1770) (p. 156 of the 1984 edition): 'le bled est la chose qui se peut le moins garder' ('Grain is the hardest thing to keep')].

²² Gallant (1991), drawing upon ethnographic data, estimates 50% to 80% wastage where the keeping conditions are not properly designed, but this was of course not the case in Rome, where there were specialized *horrea*. See Gallant (1991: 94–8).

This brings us back well within the range defined above. It is also true that, if we do accept that there is an Augustan source for the *Epitome*, then three-quarters of a century separate it from Flavius Josephus; and the proportion of Egyptian grain in supplies sent to Rome could well have changed in that time. This, however, would probably have come about through an increase in the total delivered,²³ rather than because there had been a reduction in the amounts deriving from Egypt. It would be a mistake to reject entirely the combination of the two sources; taken together, they place grain deliveries towards the higher end of the range.²⁴

OIL

As we know, oil was used not only as a food but also for lighting and for rubbing down at the baths and in the palaestra. Consumption of it cannot be measured in calories; and no useful figure for it has come down to us. This is why we must have recourse to archaeology and, more particularly, to Monte Testaccio. South of the ancient city, behind its largest *horrea*, this mound of sherds, 35 metres high and 700 in circumference, contains, according to the calculations of Emilio Rodríguez Almeida,²⁵ the broken bits and pieces of more than 50 million oil amphorae (equating to some 37 million hectolitres of oil), which, despite our uncertainty about the date when dumping began there, appear to have been accumulated between the time of Augustus and AD 255—in other words, over a period of about two and a half centuries. This would mean that Rome took delivery of oil in amphorae of the order of 150,000 hectolitres annually. But, however convenient it was to have a place, regularly treated with lime, for dumping amphorae spoiled and made unusable by grease, not all of them ended up there; bits of them can be found in the other excavations at Rome. For instance, the team led by Clementina Panella has calculated that they make up 12–17 per cent of all fragments of amphorae retrieved from three excavation contexts at the foot of the Colosseum and in the Forum, all dating between the middle of the first century AD and the early second century. This would mean that the notional figure for oil delivered in amphorae from Baetica and Africa, if based solely on the Monte Testaccio evidence, falls well below the real one, though by how much is unknowable. Any attempt to include consumption in this quantification would have to add

²³ See Tacitus, *Ann.* VI. 13.

²⁴ I am grateful to Federico De Romanis for the comments he kindly offered on this part of my text.

²⁵ Rodríguez Almeida (1984: 116–19).

in the oil from the Sabine region, which was in constant production, though delivered to Rome in containers that have disappeared without trace.

WINE

On the matter of wine consumption in Rome, there is not much to alter in the estimates I made ten years ago.²⁶ My starting point is once again Cato and the ration he gave to his slaves (Cato, *Agr.* 57), and especially a handful of texts and inscriptions that appear to show that sobriety consisted with drinking only a *sextarius* (0.54 litre) and that three of these measures could be drunk on feast days. From this, my deduction was that the average daily consumption of an adult male was about between 1.5 and 2 *sextarii*. This range falls far short, possibly too far, of wine consumption in Italian towns between the fourteenth and the eighteenth centuries. In this chapter, I merely apply it to the figures for Rome's population that I discussed when dealing with grain: between 1,170,000 hectolitres and 1,460,000 hectolitres for a population of 800,000; or between 1,750,000 hectolitres and 2,200,000 hectolitres for a population of 1,200,000. I restate my benchmark figure from 1986: the 730,000 hectolitres of wine drunk in Paris at the time of the Revolution.

Using such a calculation leaves one with a difficulty that is the converse of that raised by the oil: once we have an estimate of consumption, how do we separate the wines in amphorae brought in by sea or down the Tiber (the origins and sometimes the quality of which we can manage to tell) from those deriving from the region of the capital, from the immediate vicinity of Rome, the Alban Hills, the Sabine region, and *Tibur* in particular? No quantifiable answer can be given to that question. There is, however, one fact, to my mind absolutely exceptional, that must be stressed: in the first and second centuries AD, seaborne wines from Laetania in Hispania Tarraconensis, from Saguntum, or from Crete, were some of the commonest and cheapest in Rome. That the staple drink of the plebs should be fetched from so far away is eloquent testimony to the amazing extent of the area required by Rome for its essential provisions and the transport system that developed to meet those requirements.

CONCLUSION

I conclude with a brief word on that last point. If we were to try to play another of these guessing games, we could hypothesize about the fleet required to keep

²⁶ Tchernia (1986: 21–7).

Rome fed. Choosing average figures from those used in this chapter, we can say that, at the height of the Empire, there may have been 50 million *modii* of grain—that is, 350,000 tons—arriving in Rome every year. For oil, I add an arbitrary 30 per cent to the number of amphorae on Monte Testaccio,²⁷ which gives 260,000 amphorae each year, mainly from Baetica, or from Africa. And for wine, my guess would be that at least half of a possible consumption of 1,600,000 hectolitres came in by sea, which would require 3,200,000 amphorae. The largest ships must have been those carrying grain, though ones with a tonnage as high as the *Isis*²⁸ must have been exceptional; I take as an average a vessel of 350 tons, which was the minimum for which shipbuilders who put a ship at the service of the *annona* could enjoy a tax exception.²⁹ One-third of the grain might have come from Egypt, a distance allowing for only two round trips each year, at the very outside; for grain sourced from other places, I suggest three round trips. The gross weight of the largest Baetican amphorae was 90 kilograms; a ship capable of carrying 2,000 of them (180 tons) was a sizeable vessel; and we may assume that wine ships carried on average 3,000 amphorae. The conclusion is that 786 ships of 150–350 tons dead weight must have been engaged in keeping Rome supplied. And this omits deliveries of salted-fish products, which archaeology shows were very frequent.³⁰ This hypothesis, rough-and-ready as it is, has some point to it, as can be seen when it is compared with the total number of ships in the entire French merchant navy in the seventeenth century: some thousands of vessels of more than 30 tons, of which a mere 400 or so had a displacement above 100 tons. Such a fleet would probably not have been up to the job of keeping the population of Rome fed in the first or second centuries AD.

[Both Elio Lo Cascio³¹ and Domenico Vera³² expressed misgivings about some aspects of De Romanis's reading of the passage from SHA, Sev. 23, 2. They had difficulty, among other things, in accepting his figure of 150,000 people

²⁷ [Hesnard (2001: 294), has rightly criticized the lack of argument in support of this figure, in an article in which she also counsels caution on the use of percentages based on small numbers of archaeological objects.]

²⁸ Pomey and Tchernia (1978). [See also, more recently, Heilporn (2000) for a possible tonnage of about 600 tonnes.]

²⁹ Dig. L. 5, 3.

³⁰ The total tonnage calculated in this way is well above that suggested by Hopkins (1983: 101): 'notionally 275 ships of 400 tonnes'. [Rathbone (2003: 198 ff.) estimates that the tonnage of Roman ships must generally have been less than this, 75 tonnes for an average boat, which would imply that there would have been a great many more vessels. He expresses proper scepticism about what such speculation might be worth, though its only purpose was, of course, to quantify possibilities if not probabilities and to stimulate the imagination.]

³¹ Lo Cascio (1997: 40–1, n. 123). He, too, actually reviews the historiography of the debate on the figures, starting with Beloch. On the other hand, De Romanis's interpretation was warmly welcomed by Virlouvet (1995b: 269–72).

³² Vera (2005b).

entitled to the grain dole, given that the *congiarium* in AD 202 was distributed to 200,000. Domenico Vera dwelt at some length on this question, from a literary perspective: he sees the text as being one of those fanciful, or fantastical, passages found in the SHA, inserting allusions to the present into a tale of the past,³³ mingling the true and the false, the plausible and the unbelievable. Vera sees the three recurrences of the allusion to this seven-yearly canon³⁴ as a sign; they add up to a sort of treasure hunt through the coded clues to a literary trick. The problem of the divisibility by seven, De Romanis's starting point, could be solved by the fact that the wild (and imaginary) extravagance attributed to Elagabalus had reduced stocks of grain by two years of canon; and consequently the calculation should turn on a period of five years (this figure features immediately after the passage that interests us, in the sentence that says the same emperor left enough oil to meet the requirements of all of Italy for five years, unanimously taken to be an invention). This makes the figure of 75,000 *modii* acceptable, as it is divisible by five. One can see how radically different the two authors' positions are: De Romanis sees the contrast between the imprecise mention of Italy's oil requirements and the exact figure given for the canon *frumentarius* as validating it; whereas Vera takes the five years given as a measure of the amount of oil to be part of the riddle concocted as an entertainment by the author of the *Lives*. It is clear that how one reads the whole sentence, including the quantities of grain and oil, will determine one's choice between the two possibilities: if we see it as a single homogeneous whole, it reads like the amusing and unreal passages in the SHA; but, if we cut it up and set the first part against the second, it is defensible to read a realistic meaning into the figures quoted.

In response to these points, De Romanis explained the 200,000 who were eligible for the *congiarium* by the inclusion of categories additional to the *plebs* entitled to the grain dole. And there were exactly, as before, 150,000 of these *plebs*, the newcomers having qualified in *locum erasorum*. He synthesized and reaffirmed his whole argument,³⁵ while clarifying his position on the meaning of *canonem relinquere*: Vera may take the author to be referring to a stock left by the emperor at his death, which was renewed by Caracalla and partly squandered by Elagabalus,³⁶ but De Romanis sees it as an annually renewable amount of tax grain equal to seven times the amount required for the dole.

³³ It has been observed several times that the use of the verb *expendere* (*ita ut cottidiana septuaginta quinque milia modiorum expendi possent*), which is found associated with grain, bread, and the canon in the Theodosian Code, means that the writer had in mind his own period (Vera 2005b: 290).

³⁴ SHA, Sev. 8, 5; 23, 2; Hel. 27, 7.

³⁵ De Romanis (2007: 222–5).

³⁶ The Life of Elagabalus (SHA 27, 7) mentions a seven-year canon existing in Rome at the start of the reign of Elagabalus and stockpiled 'thanks to the far-sightedness of Severus and Bassianus': *cum eo tempore juxta provisionem Severi et Bassiani septem annorum canon frumentarius Romae esset*.

He points out that this would involve the end of a free trade in grain for Rome at that time, as the canon was equal to the total consumption of the city. In fact, there is no doubt that the emperor's holdings in grain did increase during the second century, particularly as a result of the growth of imperial estates in Italy; and the lesser role played by traders (*mercatores frumentarii*) as that of ship operators (*navicularii*) grew was noted a fair while ago.³⁷ Not all scholars, however, rule out the survival of free trading.³⁸

My translation of *possent* as 'could have', which I am sticking to, does, however, to my mind, as I have said, cast some doubt, even if we opt for the realistic reading, on the value of the figure in the SHA as an indicator of consumption in Rome; and there is no necessary significance in the closer correspondence between the 63 million *modii* per annum, deriving from *De Romanis*'s suggested amendment, and the 60 million *modii* arrived at by combining the passages from *Flavius Josephus* and the *Epitome*.

The various attempts to construe the passage from the *Life of Severus* result in extremely learned and extremely subtle constructions of reasoning, all of which, however, entail difficulties and are marked by a complexity that might seem discouraging to anyone who is not a specialist in exegesis of the SHA.

On the other hand, *De Romanis* has also re-examined in detail the question of the monthly ration of five *modii* for those entitled to the *dole*.³⁹ He accounts for this by the fact that there was a high-quality type of bread in Rome, baked from *similago*, a hard-grain flour, finely sieved. Pliny says that one *modius* of wheat reduces to just half a *modius* of *similago* and gives eleven pounds of bread.⁴⁰ The monthly ration of five *modii* of grain corresponds thus to less than two pounds of white bread per day, a less nourishing diet than wholemeal bread. Such consumption is quite plausible, but would need to be supplemented from other sources. The five *modii* that Seneca speaks of in connection with the slave who was an actor can be justified in the same way.

Those who were entitled to the grain *dole* were privileged citizens; not all Rome's inhabitants ate this white bread. A fair number of them must have eaten bread of lesser quality, baked from coarser flour and retaining more nutritious elements.⁴¹ Obviously, we should not assume that the monthly ration of five *modii* represents average consumption in Rome. The diet of *similago* bread eaten by a fair proportion of the population does, however, contribute to raising the average. *De Romanis* also reminds us that there was genuine industrial use

³⁷ e.g. Rickman (1980a: 271).

³⁸ Cf. Virlouvet (2000b: 122, 125). Erdkamp (2005: 249).

³⁹ *De Romanis* (2003b).

⁴⁰ Pliny, HN XVIII. 89, which actually says that one *modius* of *similago* will give 22 pounds of bread.

⁴¹ Garnsey (1991: 77). The more nutritious bread was a source of other dangers.

of soft-wheat flours in copper foundries and paper-making.⁴² These observations strengthen the arguments already presented for the plausibility of there having been annual deliveries to Rome of about 60 million modii of grain; and I would be even more inclined to make this case than I was in 2000.⁴³

⁴² Pliny, HN XIII. 82; XVIII. 89.

⁴³ Pace Erdkamp (2005: 228–9, 257), who retains Garnsey's 30 million modii, though without discussing either the Italian authors whom I have quoted or the clarifications published by Virlouvet (1995b, 2000b).

Food Supplies for Rome

Coping with Geographical Constraints

During the period of the Empire, Rome had become so gigantic that the logistics of keeping it supplied point up the constraints of the city's geographical situation. It is often said that no European city equalled the population of ancient Rome until London in the very last years of the eighteenth century and Paris just before the middle of the nineteenth. But what is less often remarked upon is the fact that both these cities lie in the centre of river basins with soil that is among the most fertile in Europe and that they stand on great rivers, neither of which is the case with Rome.

THE ROMAN COUNTRYSIDE AND LONG-DISTANCE SUPPLIES

In the eighteenth century, Paris was supplied with grain almost exclusively from farms less than 50 kilometres away. G. W. Grantham has attempted to draw up a theoretical model of an 'area of intensive exchange between country and town'.¹ This is the area of peasant transport, requiring no intermediaries or offloading and reloading, within a radius of 45 kilometres. In southern parts of France, this radius enables a town of 50,000 people, if it actually has such an extensive hinterland, to be properly supplied. The fact is, however, that, in the vicinity of Rome, such an extent of land is hard to come by, except northwards along the Tiber valley or some distance away to the south-east in the upper valley of the Garigliano. To the west and the south, there is nothing but sea; to

First published in B. Marin and C. Virlouvet (eds), *Nourrir les cités de Méditerranée. Antiquité—Temps modernes* (Paris: MMSH, Maisonneuve & Larose, 2003), 45–60. Passages on papal Rome have been deleted.

¹ Grantham (1997: 706–10).

the north-west, there is the infertile Maremma region; and to the north-east and east, there are the Sabine, Tiburtine, Prenestine, and Alban hills. From the start of the Republican period, at least according to the tradition handed down by the annalists, the Roman authorities, at times of shortage, were bringing in grain from farther afield in Italy, and even then from Sicily. The really important change came about in 241 BC, when Sicily became a Roman province. Grain tithes, plus the buying of grain at fixed prices, were then able to provide much of what Rome needed. Bids were called for the garnering of this grain. The aediles with the state's contribution, and the tax-gatherers with the surplus that gave them their profit, were able to bring large amounts of grain to market in Rome. This geopolitical phenomenon was to intensify until Augustus with the creation of the other grain-producing provinces. By the time of the Empire, buying from foreign parts had stopped, because there were no more foreign parts. What there was, was an experienced organization for bringing in grain by sea. Because of the growth of the Empire, the food-supply system (*annona*) of ancient Rome functioned very differently from that of Rome under the popes. Within the agrarian economy of central Italy, it brought about profound change in distribution. And it abolished the limits put upon the city's development by its need for grain.

THE TIBER

French travellers have at times been unimpressed by the Tiber. The most recent of them, Julien Gracq, is one of the most trenchant: 'The Tiber is hardly a river; it is more of a stream.'² And yet, the average flow of the Tiber at Rome is 230–240 m³/s; this compares with the average flow of the Seine in Paris of 320 m³/s. Its slope, which is steep upstream from the confluence with the Nera, becomes more gentle lower down: 0.33 m/km as far as Fara Sabina, then 0.24 m/km from Fara to Rome. The permeability of the fractured karst country of the Apennines, compensating the reduction in run-off water by more constant spring water, gives the lower Tiber a regular flow via its main tributaries, the Aniene and the Nera. The average flow of the latter, 90 m³/s, is actually greater than that of the Tiber at their point of confluence. The difference between the extreme monthly averages at Rome is not generally greater than a factor of 2.6, which is not extraordinary (and can be contrasted with those in the Upper Tiber: as high as 13.42 at Baschi, where Umbria adjoins Latium). In short, as several historians have taken pleasure in observing, the Tiber is no wadi. Or, as Joël le Gall says: 'A flow that is always

² *Autour des sept collines* (Paris: José Corti, 1988), 87.

sufficient, rarely excessive, and any excess always of modest proportions, does this not add up to an ideal waterway for human use?³ It really is the *perennis amnis et aequabilis* (river with permanent and regular flow) as described by Cicero, the *rerum in toto orbe nascentium mercator placidissimus* ('the most peaceable trader of goods from the world over') as Pliny the Elder puts it.⁴ Even though, according to the most traditional accounts, which to my mind are also the most reliable, the navigability of the Tiber may not explain the original founding of the city (which started as a crossing point on the river, thanks to the Capitol's closeness to the Insula Tiberina and the slopes of the Janiculum, which are not far from it), it was what enabled ancient Rome to grow so huge and also explained its later revival.

Orte, some 100 kilometres upstream, just above the confluence with the Nera, seems to have generally been the farthest limit of regular navigation. As late as 1905, barges still came up that far. Strabo mentions that the *Nar* (the Nera) was navigable by boats that were not very large;⁵ and the bricks used in Rome in the second century AD, from the workshops at Narni on the Nera and from Otricoli just below the confluence, were clearly brought down river in abundance and without difficulty.

Navigation, however, at least on the way down, went on well above the confluence with the Nera. Strabo, in a passage where he speaks mainly of the need for building materials, says:

the Romans are afforded a wonderful supply of materials by the large number of mines, by the timber, and by the rivers which bring these down: first, the Anio, which flows from Alba, the Latin city next to the Marsi, though the plain that is below Alba to its confluence with the Tiber; and then the Nar and the Teneas, the rivers which run through Umbria down to the same river, the Tiber; and also the Clanis, which, however, runs down thither through Etruria and the territory of Clusium. (trans. H. L. Jones, adapted)⁶

Obviously, not every river in that list was as important as every other one. At the confluence with the Paglia, not far from Orvieto, the remains of a large building, which was identified long ago but has now apparently disappeared, seem to have included storehouses.⁷ Wine from Pliny the Younger's villa reached the river at *Tifernum Tiberinum* (Città di Castello), from where it was sent down to Rome when seasonal navigation permitted. At that point, as Pliny the Younger says, the Tiber was *navium patiens, omnesque fruges devehit in urbem, hieme dumtaxat et vere* ('navigable, so that all produce [is] conveyed to Rome by boat, but only in winter and spring').⁸ Even above that point, to make use of the river, much ingenuity was required with small boats; or at least timber could be floated down tributaries such as the Tinia or the Clanis (the

³ Le Gall (1952: 17).

⁴ Cicero, *Rep.* II. 10; Pliny, III. 54.

⁵ Strabo, V. 2, 10.

⁶ Strabo, V. 3, 7.

⁷ Quilici (1986: 207, fig. 11).

⁸ Pliny the Younger, *Ep.* V. 6.

Chiani): the water was held back by dams that, when opened, increased the flow.⁹ All this is clear evidence that there was a pressing need to work the waterways as much as possible, even if they were quite small.

Along river banks in the Tiber basin, Rome's hinterland (as it has been called in a recent monograph¹⁰) was thus extended much farther northwards than would appear to be the case. The dual role of the river, upstream and downstream from Rome, is well defined in the fifth-century cosmography of Pseudo-Aethicus:¹¹ *et maritimas naves suscipiens et mediterraneas adducens de Etruria vel Sabinis* ('receiving ships from the sea and also bringing down those which come from inland, from Etruria and the Sabine region') (trans. E. Minchin).

According to Philostratus,¹² it took three days for a vessel to travel up the river to Rome. Although small boats could be rowed, towing was always the main method used on the way upstream. Ancient-world scholars can sometimes feel embarrassed by the fact that evidence of man-hauling¹³ in two sources from the early Empire contradicts Procopius' mention of towing by oxen in the sixth century AD.¹⁴ Was ox-hauling a new thing? This is possible; but simultaneous use of both methods is equally possible, as was the case in the seventeenth and eighteenth centuries.¹⁵

All this requires there to have been regulations and maintenance of the river and its banks. In Antiquity, the body of curators of the Tiber (*curatores riparum et alvei Tiberis*) was established, after the flooding of AD 15. This was an important stage in the career path (*cursus*) of senators. The curators had offices in Rome and Ostia. According to Cassius Dio,¹⁶ they were charged with the (superhuman!) task of 'making sure that it should neither overflow in winter nor fail in summer, but should maintain as even a flow as possible all the time' (trans. E. Cary, adapted). It was also their job to make sure that the riverbanks were not obstructed by illegally sited buildings encroaching on the public areas marked off by boundary stones (*cippi*), and that the riverbed was not clogged up by debris. They were responsible for maintenance of the quays in Rome (one of the meanings of *ripa* being 'quay') and presumably also for the state of the banks along which the hauling took place. In Le Gall's view,

⁹ Pliny, III. 53: *Tiberis...tenuis primo nec nisi piscinis corrivatus emissusque navigabilis* ('the Tiber, at first it is a narrow stream, only navigable when its water is dammed by sluices and then discharged') (trans. H. Rackham). Traces of these structures, which were sometimes mentioned by authors or in personal accounts dating from before 1940, have been sought, but to no avail, possibly because more recent demolition may have completely obliterated them; see Quilici (1986: n. 92).

¹⁰ Morley (1996). ¹¹ *Geographi latini minores*, 83.

¹² Philostratus, *V.Ap.* VII. 16. Cf. Le Gall (1952: 257). In the seventeenth and eighteenth centuries, two days sufficed: D'Onofrio (1970: 252).

¹³ The low-relief on the base of the statue of the Tiber in the Louvre; and Martial, IV. 64, 21.

¹⁴ Procopius, *Goth.* I. 26.

¹⁵ Mocchegiani (1984: 67, 76, pl. 9); *Tevere* (1986: 157–8).

¹⁶ Cassius Dio, LVII. 14.

there were no towpaths, since the variable levels of the river would have made them unusable; so the sloping embankments were used instead. However, a towpath can be seen by the castle of Ostia in a sixteenth-century engraving,¹⁷ when the conditions of the waterway were not very different; and, near the Milvian Bridge in northern Rome, traces of the one used in Antiquity may be visible on the right bank.¹⁸

As the maximum tonnage for a ship going up the Tiber, Dionysius of Halicarnassus specifies 3,000 amphorae, which corresponds to about 150 tons dead weight.¹⁹ Anything larger had to be offloaded at sea into river boats, which were quite well known in Antiquity: *naves caudicariae*,²⁰ or *lintres*, which were narrower and faster, and could also be rowed.

In Rome itself, the oldest port, Varro's *portus tiberinus*,²¹ was beside the temple of Portunus, between the point of the Insula Tiberina and the bend in the Tiber. Hereabouts there was a recess in the river that made a suitable place for docking. The period of the great development of infrastructure was the early years of the second century BC, in conjunction with construction of the *porticus Aemilia*, downstream from the Aventine Hill and opposite what would become the port of Ripa Grande in the Middle Ages. The *porticus Aemilia* was a huge warehouse, covering nearly 3 hectares, which would always remain one of the largest buildings in Rome.²² Downstream from the Insula Tiberina, in the heart of Rome, the Tiber was lined with quays. Both older and more recent excavations on the *Lungotevere Testaccio* have given clear evidence of Trajan's major rebuilding works, the split-level quays designed for the Tiber's highs and lows, the ramps linking them, and the long rows of *horrea* behind them.²³ Farther along, there are traces of quays and buildings for a distance of about 2 kilometres, downstream from the Ponte

¹⁷ Mocchegiani (1984: 63, fig. 26). ¹⁸ Quilici (1986: 200).

¹⁹ Dionysius of Halicarnassus, *Ant. Rom.* III. 44.

²⁰ [For these, see Boetto (2008), 55–9; Boetto et al. (forthcoming). The author estimates that the fleet of *caudicariae* required for conveying cargoes from Ostia to Rome would have consisted of 250 vessels.]

²¹ Varro, *LL* VI. 19.

²² [For the name of the large structure represented on fragments 23e and 24a–c of the *Forma Urbis*, which has been restored as (Porticus) [AEMI]LIA since Gatti, several new hypotheses have more recently been suggested and discussed: [(Horrea) CORNE]LIA (Tuck 2000), [NAVA]LIA (Cozza and Tucci 2006, disputed by Arata and Felici 2011, but reiterated by Tucci 2012). Current excavations at the assumed site of these fragments of the *Forma Urbis* have not reached the levels of the Republic and thus offer no conclusive evidence. The previous interpretation may well stand.

Whatever the case may be on that matter, Livy's sentence continues with the words *emporio ad Tiberim adjecto*, which link the aediles' construction to commercial objectives, as is made abundantly clear by the very act of erecting an emporium. It is therefore still possible to argue for the link between the aedileship of the Aemilii, the establishing of a customs post in 199 and the settlement of a colony at Puteoli in 194, three events that Zevi (1994: 64; 2002) has seen as evidence of a policy by the Scipio clan designed to improve the conditions for supplying food to Rome and thereby to increase their own popularity.]

²³ Meneghini (1985).

Testaccio, then round the loop downstream from S. Paolo fuori le Mura, at Pietra Papa, and as far as the *Vicus Alexandri*, later known as *porto della pozzolana*, where the obelisk of Constantius II was unloaded.²⁴

The ancient Pons Sublicius or, more broadly, the Insula Tiberina marked the separation between sea-river traffic and river traffic proper upstream, anticipating the modern distinction between the port of Ripa Grande (at Porta Portese) and the port of Ripetta.²⁵ Although development along the embankments upstream does not appear to have been on the same grand scale as in the downstream parts, there is no shortage of traces of port facilities. Along the left bank, between the modern Ponte Sant'Angelo and Ponte Umberto, there was probably an area for unloading the wines coming down the river, the *portus vinarius*. An oblique mole, almost 100 metres long, dating from the time of the Republic or at the latest from the reign of Augustus, was subsequently built into Hadrian's quays. It now seems likely that there was a jetty where the future port of Ripetta would be built, between the Ponte Cavour and Augustus' mausoleum. Definite evidence of quays has been identified on the opposite bank, as well as developments farther upstream on the embankments between the Ponte Flaminio and the Ponte Risorgimento. There are other traces near the Milvian Bridge in the northernmost parts of Rome.²⁶

THE SEAPORTS

Ostia, at the mouth of the Tiber, on the left bank, served for a long time as Rome's seaport.²⁷ These days, it is generally accepted that the reason why no archaeological find has yet confirmed what Livy²⁸ and the annalistic tradition tell us about the founding by Ancus Martius of a settlement at the mouth of the river in the late seventh century BC is that it did not occupy the site of the Ostia known to us and that no trace of it has ever been found. The oldest vestiges at the present site are the walls of a square citadel (195 × 125 metres), the *castrum*, at the junction of the road to Rome and a coastal road. This citadel is usually taken to date from the fourth century BC. Its military purpose is clearly evident; but what is not clear is whether it was a refuge for people who lived elsewhere or a Roman military outpost.

²⁴ Castagnoli (1980: 37–8); Mocchegiani (1984: 34–5).

²⁵ Le Gall (1952: 157); Krautheimer (1999: 641–2).

²⁶ Quilici (1986: 200–4); De Caprariis (1999).

²⁷ The following lines summarize the clarifications in Tchernia and Viviers (2000: 769–71, 779–81).

²⁸ Livy, I. 33, 9.

There is a lack of evidence on how Ostia's integral role in the food-supply organization evolved. Arrival of shiploads of grain must have become regular, once Sicily had become a Roman province. During the Second Punic War, Ostia functioned as a centre for the concentration and distribution of military supplies.²⁹

And yet Ostia, as Strabo says in a form of words that strikes us as a paradox,³⁰ was a town without a port. The flow of the Tiber at its mouth is not very different from what it is at Rome, setting it even more apart from the great rivers of more northern parts, such as the Seine at Rouen, which can easily accommodate seagoing ships because its flow has increased from 320m³/s at Paris to 500m³/s. Ostia was a river town spread along the bank of the Tiber, which opens onto an inhospitable coast, low, flat, and devoid of useful landmarks for any ship making its final approach (landmarks for Rome were the Alban Hills). 'It is not without danger', Strabo adds, 'for ships to moor out to sea among the waves'.

After the Second Punic War, when the growth of the population of Rome had led to a great increase in seaborne imports, and when ships' tonnages were also increasing in the Mediterranean, it became necessary to create a proper outer harbour for seagoing vessels. On the coast of central Italy there are not many natural harbours: in Latium, there was only Caieta; and, apart from that, only the Bay of Naples stands out. So it was there that Rome founded its second outer harbour, Puteoli, nearly 200 kilometres from the first, soon after the end of the Second Punic War. Thus it was that a port complex, widely dispersed over a great distance, functioned unchanged for two and a half centuries. One could make a fair comparison between the Roman system and that centred on Seville at the time of the *Carrera de Indias*: a large city on a navigable river, but with a harbour bar that kept out ships of more than 400 tons; with a settlement at the river mouth, Sanlúcar de Barrameda, and a real seaport, Cadiz, in a good position. The difference was that Cadiz was only about 40 kilometres away from Sanlúcar.

Once the population of Rome had approached, then passed, the million mark, this system started to show its limitations. The sheer size of the coastal fleet doing its return trips to and from Puteoli and Ostia was becoming unmanageable.³¹ On the coast-hugging trip, exposed to the squalls of the westerly or south-westerly *libeccio* that could blow a ship off course, such incessant maritime comings-and-goings were fraught with risk. The coastline between Terracina and Rome has none of the places where sailors in the

²⁹ Livy, XXIII. 21, 5; 38, 13; XXV. 3.

³⁰ Strabo, V. 3, 5.

³¹ [Camodeca (1994: 110) estimates that there were more than 1,000 ships arriving at Puteoli every year and several thousand setting sail for the Tiber. See also pp. 215–16. Gianfrotta (1993: 119) explains the thousands of lamps showing evidence of having been used discovered in one of the rooms of the horrea of the Portus Iulius at Puteoli by the need to maintain work after dark on the handling operations required by such intensive sea traffic.]

ancient world sought a sheltered anchorage if seas and wind put them in jeopardy. Even more serious was the practical impossibility of letting a city of a million inhabitants go without seaborne supplies during the four months of the *mare clausum*—the time when, throughout Antiquity, it was thought not advisable to put to sea. Cassius Dio's explanation was to the point:

the region near the mouth of the Tiber had no safe landing-places or suitable harbours, so that their mastery of the sea was rendered useless to them. Except for the cargoes brought in during the summer season and stored in warehouses, they had no supplies for the winter; for if any one ever risked a voyage at that season, he was sure to meet with disaster. (trans. E. Cary)³²

Until the time of Trajan, food shortages were frequent in Rome, some of which can be seen to have resulted from the difficulty of replenishing the city's granaries during the *mare clausum* months.³³ Various solutions were devised, one of them going back to Caesar: divert the course of the Tiber at the point where it leaves Rome, so as to bring its mouth to Terracina, thus sidestepping the dangers of sailing between Puteoli and Ostia; or else build a port at the mouth of the Tiber, thus eliminating offloading at Puteoli.³⁴ This set the parameters of the problem: a port or a canal. The possibility of making a harbour at Ostia was issued as a subject of exercises in the schools of rhetoric, as Quintilian was to remember in later years.³⁵ In AD 42, Claudius, against the advice of his architects, set about building the harbour. A huge dock of almost 150 hectares was created; Nero inaugurated it in AD 64. Meiggs³⁶ believes that the construction of the harbour required more labour than the draining of the Fucine Lake, which Suetonius says took 30,000 men eleven years to accomplish. Not that Nero had abandoned the idea of the canal from Ostia to Puteoli; he actually got work started on it. The traces of it have now been studied: a third of the colossal project was completed; and it was interrupted only by the death of Nero. The final stage in the transformation of the port facilities at Ostia was to be undertaken by Trajan: behind Claudius' harbour, he set in train the construction of the 33-hectare hexagonal basin that is still there: *Traianus portum Augusti restauravit in melius et interius tutiorem nominis sui fecit* ('Trajan restored and improved Augustus' harbour and farther inland built another safer one which bears his name') (trans. E. Minchin).³⁷ An artificial harbour, entirely man-made, became the greatest

³² Cassius Dio, LX. 11 [see p. 217, n. 31 for Greek text].

³³ [See Ch. 12.]

³⁴ Suetonius, Cl. XX. I; Plutarch, Caes. LVIII. 5: τῇ δ' ἐργαστα τῆς Ῥώμης θαλάσσης κλεῖθρα διὰ χωμάτων ἐπαγαγὼν καὶ τὰ τυφλά καὶ δύσορμα τῆς Ὤστιανῆς ἡϊόνος ἀνακαθηράμενος, λιμένας ἐμπούησασθαι καὶ ναύλοχα πρὸς τοσαύτην ἀξιόπιστα ναυτιλίαν ('and further, to build moles which should barricade the sea where it was nearest to Rome, to clear away the hidden dangers on the shore of Ostia, and then construct harbours and roadsteads sufficient for the great fleets that would visit them') (trans. B. Perrin).

³⁵ Quintilian, *Inst. Or.* III. 8, 16; cf. II. 21, 18.

³⁶ Meiggs (1973: 55).

³⁷ Scholium to Juvenal, XII. 75; see lines 75–82.

port in the world. It offers one of the most striking images of the vast resources that ancient Rome could muster to meet its needs.

Rome did not, however, stop using Puteoli, one of whose advantages was its abundant warehouses; until the third century, in many parts of the town, they were to be subject to constant expansion. And at the same time, to the north, Trajan constructed another artificial outer harbour, *Centumcellae*, which was to become the port of modern Rome, Civitavecchia. This site does not have the same obvious advantages as Puteoli, though we can state that Capo Linaro protects the harbour from being silted up by the Tiber and that the hills of La Tolfa could act as good landmarks. On the Tabula Peutingeriana the vignette for *Centumcellae* shows *horrea*, a sign that the new port also expanded the potential for warehousing. Until the third century, more space for this was also being made constantly available in Rome and Ostia. One of the lessons to be drawn from the history of Rome's ports is that stockpiling supplies must be constantly in the minds of those in charge of a huge metropolis. In ancient Rome, the return of the *mare clausum* every winter meant that storing provisions for more than four months had to be planned. According to Catherine Virlouvet's calculations, based on quite low estimates of consumption and population, about 60,000 tons of grain were required.³⁸ With the construction of Claudius' harbour, it was not as difficult for ships to arrive during the winter in cases of necessity. But the building-up of reserves for the longest possible time had become a criterion of good governance per se. The great drawback with such a policy of stockpiling was, though, the wastage incurred in every instance, sometimes involving great losses of grain.

What Richard Krautheimer says of medieval Rome, that it was 'moored to the Tiber',³⁹ could be said of ancient Rome. And yet, despite all its qualities, the Tiber was not the perfect river opening onto a friendly shore. Its worst feature was the contour of the Italian coastline between Ortebello and Caieta. Admittedly, Rome was a city built at the first bridgeable point on the most navigable river flowing into the central Mediterranean. But, had it not been for the ruthlessness of the bandits who gathered round Romulus and the equally efficient ruthlessness of their descendants, there is no certainty that this would have been enough to ensure its future as a dual metropolis, both ancient and modern.

[Fausto Zevi has published a sweeping synthesis (2001a, b; 2004) of Rome's harbours and their evolution; his 2001b article, the most wide-ranging, is now the standard work on the subject. In re-examination of the surprising fact that no horrea were built round Claudius' dock, and the huge extent of it, Zevi concludes that what has been called a port was in fact a roadstead with facilities, in which lighters still unloaded ships at anchor, but in an anchorage that was

³⁸ Virlouvet (1985: 96–102).

³⁹ Krautheimer (1999: 636).

sheltered. The intention of Claudius and his architects was to obviate the dangers inherent in such operations if carried out on the open sea, as Strabo had described (V. 3, 5). It was Trajan who built the port proper.

In the light of this interpretation, Caesar's plan, as recorded by Plutarch, can be more accurately discerned: in constructing barriers against the sea where it was closest to Rome and eliminating shallows, the idea was not to build a port with quaysides, but to make safe and sheltered roadsteads (λιμένας), which was exactly what Claudius would later do. We may even assume that what he was aiming to put into effect was Caesar's very plan. This also raises the matter of the other project mentioned by Plutarch, the diverting of the course of the Tiber so as to link Rome directly to the Terracina area. Nero's canal, though it used very different procedures, was aiming at the same result. Nero, who had had to complete and inaugurate in AD 64 a construction project not of his own devising, probably intended to leave his personal mark on the improvements to Rome's food-supply system and the realization of Caesar's plans. This explains the construction of the canal, the need for which, now that Claudius' roadstead existed, was not so pressing, and which, in Caesar's mind, would only have been a Plan B.⁴⁰

⁴⁰ For an account of the recent excavations of Claudius' harbour, which confirm previous findings while extending its area to 200 hectares, see Morelli, Marinucci, and Arnoldus-Huyzendveld (2011) and, for more recent syntheses on the port of Rome, Keay and Paroli (2011) and Keay (2012).

Claudius' Edict and Ships of 10,000 *modii*

An edict issued by Claudius, decreeing some advantages for builders of ships capable of carrying more than 10,000 *modii*, is well known to us from three sources: texts by Suetonius, Gaius, and Ulpian.

Suetonius, *Claudius*, XVIII. 3–4 and XIX:

Artiore autem annona ob assiduas sterilitates detentus quondam medio foro a turba conuiciisque et simul fragminibus panis ita infestatus, ut aegre nec nisi postico euadere in Palatium ualuerit, nihil non excogitauit ad inuehentos etiam tempore hiberno commeatus. Nam et negotiatoribus certa lucra proposuit suscepto in se damno, si cui quid per tempestates accidisset, et naues mercaturae causa fabricantibus magna commoda constituit pro condicione cuiusque : cui uacationem legis Papiae Poppaeae, Latino ius Quiritium, feminis ius IIII liberorum; quae constituta hodieque seruantur. (When there was a scarcity of grain because of long-continued droughts, he was once stopped in the middle of the forum by a mob and so pelted with abuse and at the same time with pieces of bread, that he was barely able to make his escape to the Palace by a back door; and after this experience he resorted to every possible means to bring grain to Rome, even in the winter season. To the merchants he held out the certainty of profit by assuming the expense of any loss that they might suffer from storms, and offered to those who would build merchant ships large bounties, adapted to the conditions of each: to a citizen exemption from the *lex Papia Poppaea*; to a Latin the rights of citizenship; to women the privileges allowed the mothers of four children. And all these provisions are in force today.) (trans. J. C. Rolfe)

Gaius, *Institutes*, I. 32, c:

Item edicto Claudii Latini ius Quiritium consequuntur si nauem marinam aedificauerint quae non minus quam decem milia modiorum frumenti capiat, eaque nauis uel quae in eius locum substituta sit sex annis frumentum Romam portauerit. (Likewise, by an edict of the Divine Claudius, Latins obtain the rights of Roman citizens if they build a ship with a capacity not less than ten thousand

This text is partially reprinted from P. Pomey and A. Tchernia, 'Le Tonnage maximum des navires de commerce romains', *Archaeonautica*, 2 (1978), 233–51 (Italian translation in *Puteoli*, 4–5 (1980–1), 29–57).

measures of grain, and the said ship, or one substituted for it, should transport grain to Rome for the term of six years.) (trans. S. P. Scott)

Epitome Ulpiani, III. 6:

*Naue Latinus ciuitatem Romanam accipit, si non minorent quam decem milium modiorum nauem fabricauerit et Romam sex annis frumentum portauerit, ex edicto diui Claudii.*¹ (A Latin acquires Roman citizenship by an Edict of the Divine Claudius, if he has built a ship having a capacity of not less than ten thousand measures of grain, and has used it during six years for the transport of grain to Rome.) (trans. S. P. Scott)

The minimum indicated, corresponding to about 70 tonnes of grain, or in volume to 1,000 amphorae,² is relatively low,³ when seen against the limit (five times higher) set by an edict cited by Scaevola, which was the minimum required to qualify for exemption from public duties.⁴ The edict issued by Claudius does not, of course, rule out the possibility that there were much larger ships in the first century AD. Vessels of small tonnages, being more effective in many situations, especially on short trips, always existed alongside large ones. The point is, however, that it was the larger ones that were particularly well suited to the large-scale systematic transport of grain for the *annona*; and it is strange that Claudius seems to have been happy to allow builders of ships that were seven or eight times smaller than the biggest ones of that time to qualify for particular benefits.⁵ The conditions referred to by Scaevola, with the equivalence between one large ship and several small ones, seem more reasonable when one bears in mind that the category of

¹ Following Gaius, I have corrected the manuscript reading *Romae* to *Romam*.

² This was the lower limit set by the edict of Augustus (Cassius Dio, LVI. 27, 3), which was designed to prevent exiles from growing wealthy.

³ However, it would be an exaggeration to say that it probably expresses the authorities' conception of the lower limit for ships engaged in seaborne trade (Wallinga 1964: 12, 27; Casson 1971: 171). Even if we leave aside the very low tonnages of vessels in the fifth and sixth centuries (Rougé, 1966: 72–3) or the Byzantine wreck at Yassi Ada, estimated at 40 tons by F. van Doorninck in Bass (1972: 137), the Mediterranean has always been known for its merchant vessels of a mere 35–40 tons (see Braudel 1976: 271–2; Carrière, 1973: 597–9 [other examples on p. 153]). A first objective of the limit of 10,000 *modii* must have been to exclude owners of the smallest boats from the intended benefits. Cf. Meiggs (1973: 291–2).

⁴ *Scaeuola libro tertio regularum. His, qui naues marinas fabricauerunt et ad annonam populi Romani praebuerint [mss: praefuerint] non minores quinquaginta milium modiorum aut plures singulas non minores decem milium modiorum, donec hae naues nauigant aut aliae in earum locum, muneris publici uacatio praestatur ob nauem (Dig. L. 5, 3) ('Scaevola, in Book III of regulae. Those who have built seagoing ships and have put them at the service of the *annona* of the Roman people, on condition that they are ships capable of carrying at least 50,000 *modii* or several ships of at least 10,000 *modii* each, are exempted from public duties, in their capacity as ship-builders, for as long as these ships, or others in their stead, shall continue to sail')* (trans. E. Minchin). (Mommsen suggests that *plures* be corrected to *quinque pluresue*.)

⁵ See Rougé (1966: 67, 72).

large cargo ships consisted of vessels of carrying capacity greater than 50,000 modii.⁶

I propose to attempt a resolution of this matter through a reading of a text by Tacitus,⁷ which describes the same food shortage as Suetonius, enables us to date it to AD 51, and gives a clearer idea of the circumstances that led Claudius to take the measures in question.

Tacitus, *Annals*, XII. 43, 2–4:

Frugum quoque egestas et orta ex eo fames in prodigium accipiebatur. Nec occulti tantum questus, sed iura reddentem Claudium circumuasere clamoribus turbidis, pulsumque in extremam fori partem ui urgebant, donec militum globo infensos perrupit. Quindecim dierum alimenta urbi, non amplius, superfuisse constitit, magnaue deum benignitate et modestia hiemis rebus extremis subuentum. (A shortage of corn, again, and the famine which resulted, were construed as a supernatural warning. Nor were the complaints always whispered. Claudius, sitting in judgment, was surrounded by a wildly clamorous mob, and, driven into the farthest corner of the Forum, was there subjected to violent pressure, until, with the help of a body of troops, he forced a way through the hostile throng. It was established that the capital had provisions for fifteen days, no more; and the crisis was relieved only by the especial grace of the gods and the mildness of the winter.) (trans. J. Jackson)

Four points can be made about this passage. First, that Rome's granaries were threatening to run out of stock. Secondly, this happened during a winter, as we can infer from *etiam tempore hiberno* in Suetonius. Thirdly, in a situation of this kind, Rome could be resupplied only by sea. For it would be difficult to read *modestia hiemis* as a mere reference to climate. A mild winter cannot of itself mitigate the severity of a present famine, even if it may help bring forward the harvest date and prevent the pangs of hunger from being aggravated by cold. To take a proper meaning from the sentence, we must assume that *hiemis* is being used in its nautical sense of 'storm', bad weather for sailing and particularly bad weather for sailing in winter.⁸ Lastly, grain was found, and disaster was avoided.

⁶ Scaevola is speaking not of a change to the edict by Claudius, specifying an increase in the required tonnage, but of a different measure. The benefits intended are not the same; and the two edicts were in force side by side, since Claudius' is still referred to by Ulpian. Moreover, we have no knowledge about the year of issue of the edict mentioned by Scaevola. [Sirks (1991a: 71–5) comes to a similar conclusion after examining these matters in detail and arguing that the edict in Scaevola must have been issued by Trajan.]

⁷ *Ann.* XII. 43. Cf. Eusebius, *Chronicle*, translated by St Jerome, year 50 (ed. Fotheringham, p. 263).

⁸ To be more precise, *modestia hiemis* is the opposite of the *magnitudo hiemis* that kept Cicero in Laodicea without news of Rome in the February of 50 BC (*Fam.* II. 14), as it is of the *saeuitia hiemis* that prevented the ships from Africa from reaching Rome in January AD 70 (Tacitus, *Hist.* IV. 38; cf. n. 32), but not of the *asperitas hiemis* that froze the seeds in the area of Antioch in Pisidia in AD 92 or 93; see Ramsay (1924).

So let us now canvass what might be the causes of such a shortage and what remedies there were. This will lead us to a satisfactory reason for the figure of 10,000 *modii*.

Let us rely on modest estimates for the population of Rome at the time of Claudius and for average consumption of grain: about 700,000 inhabitants, each consuming, on average, 3 *modii* a month. This gives a total consumption of nearly 70,000 *modii* a day, adding up to more than 25,000,000 *modii* per year.⁹ At the time, providing these amounts of grain was beset by four problems: finding sources of supply; shipping grain from overseas to Italy;¹⁰ delivering grain to Rome, which at that time was either a city without a port¹¹ or, if one prefers, a city with a port 200 kilometres away, at Puteoli;¹² storing and building up enough reserves.

A small but indispensable part of the grain derived from Latium and the valley of the Tiber.¹³ But the great bulk of it came from the provinces,¹⁴ and it was carried by sea: Cassius Dio said so,¹⁵ and the Romans developed this theme into a *topos* of nostalgia for the past.¹⁶ The largest vessels, in particular, the Alexandria fleet, docked at Puteoli. Ships with carrying capacity of 3,000 amphorae (about 150 tons dead weight; a little more than 20,000 *modii* of grain¹⁷) could not sail up

⁹ On our uncertainty about average grain rations, see, e.g., Jardé (1925: 128–42); André (1961: 73–4); Pavis d'Escurac (1976: 172). The figure I am using, which is considered to be a minimum, is actually less than half of what is often assumed from a joint reading of texts by Flavius Josephus (*Bell. Iud.* 2, 383, 386) and Aurelius Victor (*De Caes.* 1, 6); see Oates (1934: 101–16); Rickman (1971: 307–11) and the numerous misgivings expressed over the years about the method and the result, especially by Charles-Picard (1956) and by Pavis d'Escurac (1976: 170). [See Ch. 10 for a complete discussion of the matter.]

¹⁰ Tacitus, eulogizing the first part of the reign of Tiberius, makes a clear distinction between the two problems: *infecunditati terrarum aut asperis maris obuiam iit* (*Ann.* IV. 6, 4).

¹¹ Claudius' port, started in AD 42, was not inaugurated until some time during the reign of Nero; although it is impossible to tell in which year, it was, however, in use by AD 62; see Meiggs (1973: 54–6, 563).

¹² My research bears upon that stage omitted from the survey by Carney (1971).

¹³ Although the growing of wheat in Latium is not attested in the sources (Sirago 1958: 229–31), we must bear in mind Cassius Dio's *ὡς ἐλπεῖν* (quoted n. 31), the possibility of growing cereals among olive trees and even vines (White 1970: 124), and deliveries down the Tiber from Etruria and Umbria (Frank 1959: v. 219, n. 3). Cf. Baldacci (1967: 278). Even if produce from Italy accounted for only a small part of total consumption, a tenth, say, that still meant several weeks' supply; and, if it failed to arrive, it would have been necessary to draw on the reserves.

¹⁴ Apart from Egypt and Africa, several provinces contributed to Rome's grain supply. See Pliny, XVIII. 63, 66, for some information. Tiberius took pride in bringing in grain from a greater number of provinces than Augustus (Tacitus, *Ann.* VI. 13): the greater variety there was in sources of supply, the better the city could cope with climate irregularities. Cf. Frank (1959: v. 219); Pavis d'Escurac (1976: 176–81).

¹⁵ LX. 11, 2: cf. n. 32.

¹⁶ Varron, *RR II, praef.*, 3, taken up by Columella, I, *praef.*, 20. Tacitus, *Ann.* III. 54, 7 (spoken by Tiberius) and XII. 43 (following the text quoted).

¹⁷ I give correspondences in weight, since the difficulty was one of limited draught. In volume, 3,000 Italic amphorae (Dr 1B) were the equivalent of 30,000 *modii*.

the Tiber without their load being lightened;¹⁸ and it was barely thinkable to let large vessels lie at moorings along that unsheltered coast for the many days required to unload them.¹⁹ Except in extraordinary circumstances, land transport for distances greater than a few dozen kilometres was out of the question, given the cost and the practicalities of it: to take one day's consumption to Rome would have required more than 1,000 carts,²⁰ as against four ships of 20,000 *modii*.

The sea was deemed to be unusable between November and March. Let us imagine a year when Rome's granaries were all but empty by the end of the transition period between two harvests—that is to say, from June on, when grain from Egypt and Africa started to arrive in Italy.²¹ Over the next four months, the city had to take delivery not just of its ongoing daily needs but also of the expected consumption during those months of *mare clausum*. Based on my low population estimate, this adds up to more than 17,000,000 *modii*—in other words, seven ships of 20,000 *modii* every day, either loaded in the provinces or, more often than not, bringing in from Puteoli grain transhipped from the largest vessels. Or let us say six, to allow for the production from Latium and Etruria.²² As for the trip between Puteoli and Rome (I limit the discussion to that itinerary to simplify things and to arrive at a rough but indicative estimate), it took at least a day and a half at sea in fair weather; the same again for the return leg;²³ three or four days for loading and the same for

¹⁸ Dionysius of Halicarnassus, *Ant. Rom.* III. 44, and Strabo, V. 3, 5.

¹⁹ The figure of two to four days given by Rougé (1952: 325) must refer to a vessel of low or medium tonnage. One indication about an Egyptian grain ship in the second century is to be found in *BGU*, no. 27, quoted in Frank (1959) and by J. Rougé in Charles-Picard and Rougé (1969: 121): twelve days for unloading. Cf. Carrière (1973: 179): at Marseilles in the eighteenth century, it took a week to unload 200 tons of cod. Unloading was, obviously, a longer and more difficult process if it was carried out at a mooring, via lighters. Cf. Strabo, V. 3, 5.

²⁰ The average capacity of a cart I take to be the 1,200 pounds mentioned in Diocletian's edict (XVII. 3). Going on Diocletian's figures, grain transported 200 miles by road must have doubled in price (bearing in mind Duncan-Jones's new data (1976: 53–62)): one *Kastrensis modius* = 1.5 Italian *modii*. Such figures (not to mention the climb to the pass north of Monte Sant'Angelo, near Terracina, which was the route of the *via Appia* until Trajan's time) rule out any possibility that, under normal circumstances, grain unloaded at Puteoli would have been carted to Rome. In 345 BC, when the Roman Senate examined the offer by the Campanians to cede their territory to Rome, many were tempted, says Livy, by the opportunity to transport produce from this fertile area by sea: *uberrimus ager marique propinquus ad uarietates annonae horreum populi Romani fore uidebatur* (Livy, VII. 31; cf. Cicero, *Rep.* II. 5, 10). On this matter, I must disagree entirely with Baldacci (1967: 284); and I share none of Pavis d'Escurac's hesitations (1976: 226). With heavy and non-precious commodities, the near-impossibility of regular long-distance overland transport, which is now taken for granted by economic historians, was well explained by Finley (1973: 126–8). [For a more up-to-date discussion of overland transport, see pp. 90–1.]

²¹ The date given in *BGU* 27 (see n. 19) seems plausible, despite Schwartz (1948: 179).

²² Comparisons with our own times would be meaningless. We can get some idea of the traffic from the fact that Marseilles in the eighteenth century had a total of six to eight ships arriving each day; see Carrière (1973: 162).

²³ These times are based on an average speed of three knots (cf. Saussure 1937: 95–8; Rougé 1966: 100; Casson 1971: 291–6). Under sail, this was not an easy trip, and in general it probably

unloading; three days for towing up the Tiber.²⁴ All of this meant there could be no more than one round trip per fortnight and consequently a theoretical minimum of ninety ships of 20,000 *modii* toing and froing non-stop throughout the months of summer and autumn. The real minimum, given the optimistic allowances I have made for the two legs of the round trip, must be well above that figure; and it would need to be further revised upwards if the calculation was based on higher assumptions about grain consumed by Rome's population.²⁵ One can well imagine that the slightest incident, a spell of bad weather, say, or any reduction in the numbers of ships available, could have brought the whole complex arrangement to a standstill. So, when Caligula tied up ships over a distance of 5 kilometres to make his pontoon bridge between Puteoli and Baiae, Rome suffered a food shortage.²⁶ One assumes that the memory of this lack of transport helps explain Claudius' edict.

All in all, there were two ways in which outbreaks of famine could occur in Rome in the time of Claudius: on the one hand, the perennial outbreaks that occurred at the transition period between harvests, either because production had been insufficient or because there was a delay in the arrival of grain from the provinces;²⁷ and, on the other, the winter ones during the *mare clausum* period, caused by the insufficiency of stocks held inside the city,²⁸ even though

took a little longer: Philostratus says Apollonius of Tyana took two days from Puteoli to the mouth of the Tiber (*V.Ap.* VII. 16); and Galen's patient who took ship from Rome to try a course of treatment with the therapeutic milk of *Mons Lactarius* did not reach Stabiae, on the far side of the Bay of Naples, until three days later, including the passage down the Tiber (Galen, ed. Kühn, x. 362–4).

²⁴ Le Gall (1952: 257).

²⁵ See Le Gall (1952: 248–9), for estimates of ship arrivals.

²⁶ Seneca, *Breu. Vit.* XVIII. 5–6; Flavius Josephus, *Ant. Iud.* XIX. 1; Suetonius, *Calig.* XIX. 1; Cassius Dio, LIX. 17, 2; Aurelius Victor, *De Caes.* 4, 3. There is a problem with the date of the famine: Cassius Dio describes the events of AD 39 and says the requisitioning of the boats caused famine in Italy and at Rome. Seneca and Aurelius Victor say the famine caused by Caligula's bridge happened right at the end of his reign; Claudius, according to Aurelius Victor, was the one who put an end to it. It must be admitted that the bridge was not just a temporary thing, but a permanent structure, and that the famine brought about by the reduction in available shipping was especially severe during the winter of 40–1 (perhaps the reserves saw the city through the first year). This suggests we should translate the beginning of Cassius Dio's concluding paragraph (LIX. 18, 1) τῆς μὲν δὴ γεφύρας ἐκείνης τοῦτο τὸ τέλος ἐγένετο as 'that was the use for which the bridge was built', giving to τέλος the meaning of 'purpose' (as against καὶ αἰτίαν καὶ αὐτὴ ... which comes after it) and not 'end' in the temporal sense. [Suetonius, ch. XXXII, 3, says the bridge received a dedicatio from Caligula, who must therefore have considered it was a structure meant to last.]

²⁷ An example of this was the famine that happened shortly before the death of Nero in June 68 (Suetonius, *Nero*, XLV. 1). It is possible, though to my mind not certain, that it was related to the revolt of Clodius Macer and a blockade on grain from Africa (Bradley 1972; Gallotta 1975: 28–46). What is certain is that the difficult time was related to the arrival dates of the first transports bringing in the harvest from Egypt and Africa, which were awaited with impatience (Pliny the Younger, *Pan.* XXXI: *ut... uenti ferentes et brevis cursus optentur*).

²⁸ Apart from the famine dealt with here, there was the one in the winter of 42, which Cassius Dio (LX. 11) links explicitly to the dangers of winter sailing near the mouth of the Tiber and which made Claudius initiate work on the harbour at Ostia. It may have been, at least in part, the

grain for Rome was sitting in warehouses elsewhere, particularly at Puteoli,²⁹ awaiting the reopening of the sailing season in March. If what was lacking was the proportion of Italian grain, sourced from not far away or brought down the Tiber, one or other of two situations could arise: either the problem was solved in the summer by increasing ship movements and hence boosting supply from the provinces, a solution that brought with it the risk of famine in the transition period if the total volume of grain imported remained constant; or the problem was not solved—if, for example, there was a shortage of means of transport—and there was a winter famine. No doubt it was possible to dip into the stockpile, which the *annona* organization was bound to be doing its best to replenish; but that was only a stopgap: one or two months' worth of reserves could not be made up all at once. In addition, a local result of famine was a drop in seed corn. Two consecutive bad harvests were a catastrophe.³⁰ This explains Suetonius' *assiduae sterilitates*.

Though *mare clausum* was the norm, attempts were made to get round the difficulty when Rome was threatened with famine in winter.³¹ This in fact had

continuation and the consequence of the one in 41, which had been caused by Caligula's pontoon bridge. In the first ten years of his reign, Claudius was faced with at least three winter famines.

²⁹ R. Meiggs (1973: 281–2) argues plausibly that the extent of the building of *horrea* during the second century at Ostia and the *Portus* can be explained by the fact that the reserves previously left at Puteoli had been stored close to Trajan's port since the time when the Alexandria fleet had first been redirected to it.

³⁰ On this matter, see Aymard (1966: 76–8).

³¹ Here I add the passage from Cassius Dio, LX. 11, referred to at n. 13, to the documentation on the *mare clausum*, more complementary than contradictory, compiled by Saint-Denis (1947) and Rougé (1952): Λιμοῦ τε ἰσχυροῦ γενομένου, οὐ μόνον τῆς ἐν τῷ τότε παρόντι ἀφθονίας τῶν τροφῶν ἀλλὰ καὶ τῆς ἐς πάντα τὸν μετὰ ταῦτα αἰῶνα πρόνοιαν ἐποιήσατο. Ἐπεσάκτου γὰρ παντὸς ὡς εἰπεῖν τοῦ σίτου τοῖς Ῥωμαίοις ὄντος, ἡ χώρα ἢ πρὸς ταῖς τοῦ Τιβερίδου ἐκβολαῖς, οὔτε κατάρσεις ἀσφαλεῖς οὔτε λιμένας ἐπιτηδείους ἔχουσα, ἀνωφελές σφισι τὸ κράτος τῆς θαλάσσης ἐποίει ἕξω τε γὰρ τῶν τῇ τε ὥρα ἡ ἐσκομισθέντων καὶ ἐς τὰς ἀποθήκας ἀναχθέντων οὐδὲν τὴν χειμερινὴν ἐσεφοῖτα, ἀλλ' εἴ τις παρεκινδύνευσε, κακῶς ἀπήλλασσε. ('On the occasion of a severe famine he considered the problem of providing an abundant food supply, not only for that particular crisis but for all future time. For practically all the grain used by the Romans was imported, and yet the region near the mouth of the Tiber had no safe landing-places or suitable harbours, so that mastery of the sea was rendered useless to them. Except for the cargoes brought in during the summer season and stored in warehouses, they had no supplies for the winter; for if anyone risked a voyage at that season, he was sure to meet with disaster') (trans. E. Cary).

This text clearly indicates (1) that, because of the contour of the shoreline and the lack of a harbour, it was extremely difficult to keep Rome in provisions during winter; (2) that this was a serious drawback in its supply system, the main cause of famine; and (3) that, even so, some attempts had been made to get round this but they ended in failure (there are, however, exceptions, at least in the case of travellers, cf. Saint-Denis 1947: 204). Things changed with the construction of Claudius' port: by AD 70, if there was a risk of famine, Romans had become used to seeing ships arriving during the winter: *Sed quia naues saeuitia hiemis prohibebantur uulgis alimenta in dies mercari solitum, cui una ex republica annonae cura, clausum litus, retineri commeatus, dum timet, credebat* (Tacitus, *Hist.* IV. 38). ('But since the grain ships for Rome were now detained by the bad weather, the common people at Rome being accustomed to buy their food day by day and having no public interests save the grain supply, believed in their fear that the ports were closed and the convoys of grain held back...') (trans. adapted from

to be resorted to in AD 51. Although Romans had only a fortnight's supply of grain left, this was not all they could rely upon to tide them over till the next harvest. The extra supply, however, had to be obtained, presumably from not very far away, since it reached the city in time. In such emergencies, the large grain carriers were of no avail: there was no point in using them on short trips; and in addition, they would have had to lie at anchor in winter for more than a week just off the mouth of the Tiber, running a much greater chance of foundering with all hands than the smaller boats.

The figure of 10,000 *modii* is entirely plausible if we read Claudius' edict in the context of the circumstances that gave rise to it. Its main aim was to make sure that Rome's granaries would always be as full as possible at the beginning of November, which was why there had to be an increase in the fleet of boats of small and medium tonnage that brought grain into a city where ships of more than 20,000 *modii* could not dock. A secondary aim was, in case of need, to have ships that were able to run the risk of bringing in grain during the winter, *ad inuehentos etiam tempore hiberno commeatus*. This was an added reason why they could not be heavy vessels. The expression *portare Romam*, more specific, can be set against the words *nauem ad annonam populi Romani praebere* used by Scaevola or against *annonam urbis adiuuare*, *annonae urbis inseruire*, which we find in the passage in the *Digest* devoted to the various exemptions enjoyed by traders and ship operators.³²

I would not argue, however, that the circumstances in which Claudius' edict was issued account for all its aims and effects. Ulpian quotes it at a time when, thanks to the construction of Trajan's harbour, the very largest ships had long been able to ride at anchor in a safe haven close to the city. Rougé even takes the view that the emperor's marine insurance was a temporary measure, covering only the year 51, an interpretation that restricts the scope of *etiam tempore hiberno* ('though it was wintertime') to a single special occasion.³³ In that case, the idea that Claudius' intention was to have ships capable of carrying grain for the population of Rome during the closed seasons of the *mare clausum* would have to be abandoned. One should presumably not rule out the possibility that, as well as solving the problems explicitly defined, he also wished more broadly to increase the number of voyages on behalf of the *annona*.³⁴ However, the text by Cassius Dio that I have quoted shows clearly that the impossibility of getting supplies to Rome during the winter was

C. H. Moore.) This happened in either January or February 70. I take *hiems* in its technical sense of 'gale', bad weather for sailing.

³² *Dig. L. 6, 6.* ³³ Rougé (1952: 318; 1966: 359).

³⁴ One can even find another, very different (and quite unfounded) interpretation: Yeo (1946: 239–40) assumes that Claudius' harbour was finished at the time of promulgation of the edict but believes that ships, for economic reasons and as a consequence of the difficulties of navigating along the Italian coast, refused to use it and went on docking at Puteoli. Claudius' purpose, we are told, was to make them use the harbour at Ostia, but it had no effect.

seen as a major drawback that had to be remedied. And, in any case, the fact remains that *portare Romam* is not the same thing as *portare frumentum populi Romani* or *populo Romano*:³⁵ the point was to deliver cargo to the port of Rome; and that, at the time of Claudius, could be managed only with difficulty by the largest ships. So the arguments I have used do explain the limit chosen by Claudius, without in any way proving that, in the first century, the general purposes of the *annona* were not served by the large vessels. Despite the figure of 10,000 *modii*, it is still plausible that, at that time, much of the grain from Egypt was delivered to Puteoli by ships capable of carrying 50,000 *modii* or more, that is to say, ships of similar tonnage to those that loaded wine from Campania at Puteoli in the later years of the Republic.

[Catherine Virlouvet accepts this interpretation of Claudius' edict and has linked it to the fact that traders' ships were excluded from the computation of their tribute, which really does seem to have affected all of them.³⁶ Boudewijn Sirks, on the other hand, has a different explanation for the 10,000 *modii*, which he sees as the minimum tonnage for a ship venturing onto the high seas, a figure that is much too high.³⁷ Nor does he stress so much the difference between *portare Romam*, as Suetonius and Gaius have it, and Scaevola's *naves ad annonam populi Romani praebere*.³⁸ He assumes that traders who benefited from the advantages detailed by Suetonius were selling their grain to the *annona*. Erdkamp seems to go farther and, contradicting Rickman (1980b: 72), sees them as transporters of goods for the *annona*, which is to downplay even more Suetonius' *mercaturae causa* and the difference between the texts that speak of servicing the *annona* and *portare Romam*, a form of words that does not rule out private trade.³⁹ Evelyn Höbenreich remarks that no maximum limit to the tonnage of the ships is mentioned, from which she concludes that the sources do not support the idea that Claudius' intention was to promote small tonnages.⁴⁰ I have accepted that the general development of the fleets used for supplying Rome with grain was probably also among his aims; but I continue to maintain that his choice of a lowish limit can be explained by the circumstances surrounding his decision and shows that he was particularly concerned with deliveries to Ostia.]

³⁵ The idea of direction or destination can be expressed by the dative with *portare* (Livy, XXXII. 18, 3: *omnes onerarias, quae commeatum exercitui portabant*) or before a place name by *ad* (Cicero, *Ad Q. fr.*, II. 8, 2: *cum hominem portarem ad Baias Neapoli octophoro*). In the Verrine speeches, Cicero says interchangeably *frumentum populo Romano mittere* and *Romam mittere* (III. 49; 117; 171; 172; 176; 179). But the equivalence, which suits the sending of grain to Rome under Verres' authority, with Verres as the subject of *mittere*, no longer applies if the subject of *portare* is a ship having to stop at Puteoli.

³⁶ Virlouvet (1985: 101, n. 43). Also Lo Cascio (1993: 58).

³⁷ Sirks (1991a: 40–4, 61–7).

³⁸ Dig. L. 5, 3.

³⁹ Erdkamp (2005: 245–6).

⁴⁰ Höbenreich (1997: 77, n. 95).

The Dromedary of the *Peticii* and Trade with the East

The first stamped Roman amphora handle found in India has recently been published.¹ The stamp, *M. Livi Caustri Surus*, dated from its presence on the Grand Ribaud wreck, on the French Mediterranean coast, towards the end of the first century BC, is on the top of a Dr. 2-4 amphora handle made in the vicinity of Pompei or Sorrento in Italy. It was found in Mathura, in the State of Uttar Pradesh, about 130 kilometres south of Delhi. At that time, Mathura was an important centre, situated at the junction of the Gangetic Valley and a route that passed through Ujjain to Barygaza in the Gulf of Cambay, one of the main ports of trade with the Roman Empire.

Mathura has thus been added to the thirty-odd sites in India where one or several Roman amphora fragments have been discovered. These sites are situated for the most part either on the Tamilnadu coast, where the Arikamedu excavations made, and still make, it possible to find several scores of fragments, or in a large circular arc around the Gulf of Cambay that includes the states of Gujarat and Maharashtra.

The great variety of the Arikamedu amphora *facies* is truly remarkable,² and it is likely that their contents (not only wine, but also olive oil and fish sauce) were partly meant for the consumption of the few Greeks and Romans settled there. Little is known about the typology of the amphorae found on the western coast or in the hinterland. But, judging by the few available drawings, they seem to be wine amphorae, especially Dr. 2-4 or Rhodian³. The *Periplus*

First published as 'Le Dromadaire des *Peticii* et le commerce oriental', *MEFRA* 104/1 (1992), 293–301. Translation first published in: De Romanis, F. and Tchernia, A. (1997) (eds.), *Crossings: Early Mediterranean Contacts with India* (New Delhi: Manohar). I am grateful to the archaeological superintendency of Abbruzzo for having sent me a photograph of the L'Aquila bas-relief and giving me permission to publish it. I would also like to thank Miss Honor Frost, who, many years ago, drew my attention to this bas-relief and sent me a sketch of it.

¹ Joshi and Sinha (1991: 255–8); Will (1991). The correct reading is [*M.*] *Liui Caustri/Sur(us)*: see Hesnard et al. (1988: 49–50 and pl. XXII); and Cotton and Geiger (1989: pl. 48, no. 960).

² Will (1991); Begley (1993).

³ Sankalia (1957); Sankalia and Erhardt (1960: 314–15, figs 45, 46).

of the *Erythraean Sea* refers three times to the export of wine from the West to India, but on a small scale. The wines that met the most success at Barygaza were from Italy and Laodicea in Syria.⁴ Accordingly, the amphora fragments found in west or central India seem to point more towards a barter trade of western and eastern Mediterranean goods. We will have to wait for a better understanding of the archaeological material to be able to speak with greater certainty.

The question also arises of the identification of the people who actually conducted this trade; knowing the origins of the amphorae is not enough to provide an answer. The route is clear: Mediterranean goods were landed in Alexandria, then loaded onto ships that went down the Nile to Coptos, from where they were carried by camel caravans to the Red Sea ports, Myos Hormos and Berenice. From there began the long sail to India, down the Red Sea and across the Arabian Sea, following increasingly direct routes. The natural inclination is to assume that, from Alexandria onwards, the Greeks or sometimes the Romans settled in Egypt took charge of cargo transfers, river and road transport, and the final shipping of the goods. All written accounts suggest this—the Archive of Nicanor,⁵ the papyrus of Vienna published recently,⁶ and even the *Periplus of the Erythraean Sea*. L. Casson said the same thing in the commentary of his edition of the *Periplus*, adding, however, that the money might well have come from Rome and other major Western centres and that some powerful Italian trading families perhaps had agents in Egypt.⁷ The most clear-cut case to date is the bilingual inscription on the wall of the Wadi Menih cave between Coptos, a port on the Nile, and Berenice, a Red Sea port. This was left by *Lysas*, a freedman of *P. Annii Plocamus*, who himself was a freedman or a member of the influential *Annii* family of Puteoli, the great harbour of the Italian West coast, and lived in that city.⁸

I believe I can provide another piece of evidence to show that the big traders residing in Italy sometimes had a part to play in trade and transportation to the Red Sea and beyond.

In 1989,⁹ P. A. Gianfrotta brilliantly related the name engraved on a *dolium* on the Diano Marina wreck in Liguria, *Peticus Marsus*, to that of *M. Attius Peticus Marsus*, inlaid in silver at the foot of a lovely bronze statuette, a replica of the Hercules Farnese, found in the sanctuary of Hercules *Curinus* near *Sulmo* (see Fig. 13.1).¹⁰ Both refer to the same person, and the Diano Marina wreck inscription makes us think that he was a wine merchant, around the

⁴ *Periplus Maris Erythraei*, 39, 49, 56.

⁵ *O. Petrie*, 220–304, published in Tait (1930). See Fuks (1951).

⁶ Latest editions: Casson (1990); Harrauer and Sijpenstein (1985); Thür (1987, 1988).

⁷ Casson (1989: 31–4).

⁸ Meredith (1953); Bernand (1977: no. 65); Camodeca (1979). See pp. 42–3 and De Romanis (1996a): 250–1.

⁹ Gianfrotta (1989).

¹⁰ See Moreno (1987; 1989: 159–67 (with bibliography)).



Fig. 13.1. Bronze statuette of Hercules. (Photo Soprintendenza Archeologica dell'Abruzzo-Chieti)

middle of the first century AD, and perhaps also a shipowner. That he donated a statue of Hercules, protector of merchants, is hardly surprising.

Towards the end of his article, Gianfrotta outlines a study of the other *Peticii* identifiable as traders. The first is the wheat merchant who, in 48 BC, soon after Caesar's victory at Pharsalia, received aboard his ship Pompey the Great as he was making his escape on a small boat. The reference to him is only through his *nomen*.¹¹ A *C. Peticius* appears later in the inscription painted on an amphora of the Byrsa hill 'wall' in Carthage.¹² The consular dates noted on the amphorae of this collection range from 43 to 15 BC, most of them (nine out of twelve) dating from 22 BC onwards¹³. This, however, does not completely exclude the possibility of the person mentioned in the inscriptions being none other than the temporary saviour of Pompey. Finally, Gianfrotta emphasizes the particularly interesting discovery of a rock inscription with the name of *C. Peticius* in the Hammamat Valley in Egypt on the route from Coptos, a port on the Nile, to Quseir-el-Qadim, a Red Sea port, the ancient Myos Hormos.

The inscription, later printed in *CIL* III. 1, 29, comes from Letronne's famous ancient collection.¹⁴ More recently, it has been republished by A. Bernand.¹⁵ In fact there is a double signature in Latin and Greek on the wall of Wadi Hammamat's *Paneion*, a rock shelter in a narrow pass where many travellers left *proskynemas* or simply signed their name to show their obeisance to the God *Pan* and other divinities worshipped there (Figs 13.2 and 13.3). The oldest date noted is probably AD 9 and the most recent AD 238, but the majority (twelve out of twenty-one) point to the rule of Tiberius. In any case, the absence of *cognomen* leads us to believe that the signature of *Peticius* could not be later than this period. There are few Latin inscriptions on this rock shelter. In Letronne's time, the *Peticius* inscription was the only Latin one, as against eighty-eight Greek ones. A. Bernand provided four more Latin inscriptions, making a total of 5 out of the 102 *Paneion* inscriptions he published. The only bilingual inscription is that of *Peticius*. Moreover, as A. Bernand has observed, there are on the whole few bilingual Greek and Latin inscriptions in Egypt, one of which is that of the freedman of *P. Annius Plocamus*. Carefully written with punched letters, the inscriptions are 45 to 65 mm high (Figs 13.2 and 13.3). 'The size and the care taken to repeat his name in two languages are perhaps proof of the fact that he was an important person, but he has not stated his position,' concludes A. Bernand. The temptation is great to think that the name on this inscription and the *C. Peticius* on the Carthage amphora refer to the same person, in which case he was obviously a merchant.

¹¹ Caesar, *BC* III. 96 and Plutarch, *Pompey*, LXXIII. 3, 6. ¹² *CIL* VII. 22640, 65.

¹³ Delattre (1894: 102, no. 20). ¹⁴ Letronne (1842: no. 468).

¹⁵ Bernand (1972: 195–6, nos 120, 121).



Fig. 13.2. Latin inscription of Peticius at Wadi Hammamat. (Photo G. Réveillac, CNRS)

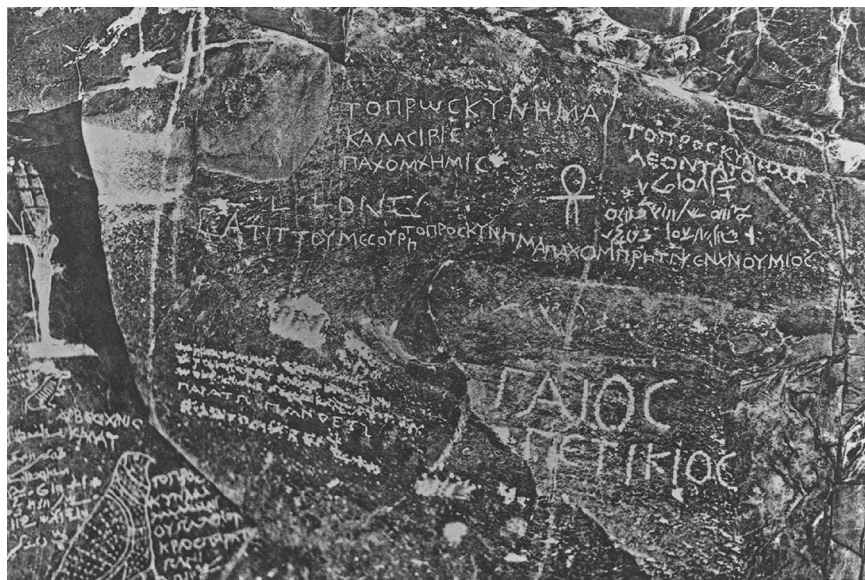


Fig. 13.3. Greek inscription of Peticius at Wadi Hammamat. (Photo G. Réveillac, CNRS)

We thus have a total of four or perhaps three individuals belonging to the *Peticus* family. A wheat merchant of the middle of the first century BC whose first name is not known; another merchant, probably a wine merchant,¹⁶ of the triumvirate period or the beginning of the rule of Augustus; a prominent traveller between Coptos and Quseir, at the end of Augustus' rule or that of Tiberius (both these characters are called *C. Peticius*); a leading wine merchant of the middle of the first century AD, *M. Peticius Marsus*, who was adopted by one *Attius*. Chronologically the first and the second could be the same person but this would make him both a wine and a wheat merchant, a combination that epigraphical evidence so far available does not seem to attest. Two and three might have been one and the same person, provided his career lasted that long, for the Carthage amphora must be twenty to thirty years earlier than the Wadi Hammamat inscription. Perhaps this is too long a period for *C. Peticius* to be still active enough to be travelling across the Egyptian desert. I am, therefore, of the view that four generations of *Peticii* have been attested over a century, and this is quite normal. The first *Peticus* dealt in wheat, the second and fourth in wine; between the Nile and the Red Sea, the third looked after the transport of goods intended for the east. The end of Augustus' and

¹⁶ The overwhelming majority of identifiable painted inscriptions and stamps published by Delattre refer to wine and wine amphorae.

Tiberius' rule saw this trade flourish, and it is to this very period that the Mathura amphora belongs. If we stretch our imagination a little further, the *C. Peticius* of the Wadi Hammamat could well be the young son of the *C. Peticius* of the Carthage amphora, acting as an agent for his aged father who was content to stay behind in his Marsic country.

The national archaeological museum of Chieti, where the bronze Hercules statuette of the Sulmo temple is exhibited, also houses a bas-relief fragment depicting on the upper half—somewhat unexpectedly in the Abruzzo—a dromedary bearing two wine amphorae,¹⁷ driven by a small figure wearing a tunic; on the lower half six men in togas (although on the right only a fragment of the sixth remains) and one woman are aligned frontally (Fig. 13.4).



Fig. 13.4. Bas-relief at L'Aquila. (Photo Soprintendenza Archeologica dell'Abruzzo-Chieti)

¹⁷ It is difficult to identify the oval object behind the two amphorae. Its dimensions are such that it cannot be a third amphora upside down.

This bas-relief, 1 metre wide and 95 centimetres high, was published by Pietro Romanelli in 1945.¹⁸ It was reused in a courtyard wall of the palace of Dragonetti de Torres in L'Aquila, and its exact origin is not known: Romanelli thought of Amiterno or *Peltuinum*. The pilaster element on the right delimits a space either open (a window) or closed (the epigraphical field), beneath which the line of people continued—about fifteen in total according to Romanelli—whereas another representation to the right of the bas-relief formed the matching piece to the dromedary. The entire work must have been part of a funeral monument. The close fitting togas may be put in the *Ab* category ('Pallium-Typus'), using the typology recently furnished by H. R. Goette,¹⁹ who includes the L'Aquila bas-relief among the representations he dates from the last quarter of the first century BC.

The amphora-bearing dromedary evidently refers to the family business or to that of certain members of the family who had the funeral monument built. Romanelli rightly concluded that it must be a 'family or a corporation (but the presence of a woman makes the first hypothesis more plausible than the second) who specialized in this trade'. 'Neither the inscriptions discovered so far in Amiterno,' he added, 'nor the literary texts which speak of this town shed any light on this matter'.

But the image of the amphora-bearing dromedary is a perfect illustration of the kind of transport *C. Peticius* supervised between Coptos and Myos Hormos. L'Aquila is about 60 kilometres from the temple of Hercules *Curinus*. If we base ourselves on Romanelli's hypothesis for the place of discovery of the bas-relief, Amiterno is a little further away, but *Peltuinum* is much closer. All these sites are part of the Aterno and Gizio basins. Although the most likely place where the dromedary stone was found is probably not within the Marsic or Paelignian territory, it cannot have been very far from there. Moreover, though the name of the *Peticii* is particularly attested in the *Sulmo* and *Corfinium* region, it is also found at *Peltuinum*, and the *Attii* are as well represented in Amiterno as in *Corfinium* and *Sulmo*. Unfortunately, we lack evidence to put forward any theory on the *Attii* who adopted *M. Peticius Marsus*, and the reasons behind this adoption. In any case, the bas-relief is prior to the time of this person. It must be contemporary with the active period of *C. Peticius* of the Carthage amphora; it may also have been contemporary with the beginning of the active period of the *C. Peticius* who left his name in the Wadi Hammamat rock shelter.

In all probability, therefore, the dromedary belonged to a funeral monument of the *Peticii* family. Otherwise, one would have to assume that another trading dynasty, settled nearby, carried out the same trade at the same time—namely, transporting wine to the East.

¹⁸ Romanelli (1943–5).

¹⁹ Goette (1990: 28, 109, no. 61).

All the documents we have reviewed complement each other, and the picture that emerges is one of a rich merchant family of central Italy, which specialized in the wine trade from the time of Augustus and, among other things, in wine trade with the East.²⁰ But, we might ask, why did they make the effort to accompany their amphorae personally across the Egyptian desert to the Red Sea? Surely it was not to sell their wine in the unimportant markets of Myos Hormos or Berenice, within a monetary economy and at a price only slightly higher than in Rome. As always, when it is a question of trade beyond the frontiers of the Empire, we must not forget that the exporters were also importers. If *C. Peticius* supervised his wine amphorae in Wadi Hammamat, he must have kept a much more watchful eye on his packets of pepper and caskets of pearls that were coming along the same route from the other direction. Wine was one of the articles used to buy pepper and pearls, and the *Peticii* made their fortune out of this unequal commerce, or, to be more precise, out of the value that the Tamils attached to the perfumed wines of the Yavanas, on the one hand, and the craze for pepper and pearls among the Romans and their wives, on the other. They were wine merchants in Italy and perhaps in the western Mediterranean, and that is how they were viewed by the landowners who sold them their grape crops. However, it was the trade in spices and precious stones that really accounted for their money and success. Very often we overlook this aspect of the merchants' activity, because both the sources and historians dwell on the sale of produce, and because agricultural products have, thanks to amphorae, left behind archaeological traces. But the fortune that was amassed under Augustus, which several decades later made it possible to dedicate a lovely statue to Hercules, came from trade with the East, managed directly from Italy. That is what is signified by the amphora-bearing dromedary, which is also an expression of pride for taking part in a great commercial venture whose beginnings, at the time of the bas-relief, belonged to a still very recent past.

²⁰ This does not preclude the possibility of their having followed other activities, including those related to production: P. A. Gianfrota suggests cattle breeding.

Winds and Coins

Trade between the Roman Empire and India

USING THE MONSOON

No One Discovered the Monsoon

Whenever there is any discussion of trade between the Greco-Roman world and India, the discovery of the monsoon is usually mentioned and generally credited to the pilot *Hippalus*, who is for many ‘one of the great names in the history of navigation’.¹ The term ‘discovery’, however, has long been criticized. Sailors do not discover a wind, and they do not invent anything when they make use of it; they merely sail with it when it takes them where they want to go. As far back as 1879, Kennedy stressed that the monsoon was common knowledge long before the disputed date when the Greeks, towards the end of the Hellenistic era or at the beginning of the Roman Empire, are supposed to have experienced it: ‘The monsoons must have been known from the earliest times to all who sailed along the African and Arabian coast, and the normal trade route from the Persian Gulf to India can never have been along the inhospitable shore of Gedrosia.’²

The two texts on which the idea of a Greek or Roman discovery of the monsoon is built are the *Periplus of the Erythraean Sea* and the end of book VI of the Elder Pliny’s *Natural History*. A recent study of the latter, however, has thrown fresh light on the subject—of which the following are the key passages:³

First published under the title ‘Moussons et monnaies: Les Voies du commerce entre le monde gréco-romain et l’Inde’, *Annales HSS*, 5 (September–October 1995), 991–1009. Translation first published in: De Romanis, F. and Tchernia, A. (1997) (eds.), *Crossings. Early Mediterranean Contacts with India*. New Delhi: Manohar.

¹ Wheeler (1954: 126).

² Kennedy (1898: 272–3). There are several other texts along the same lines including Thapar (1990: 107): ‘There was little to discover, since the Arabs knew of it earlier’, and Curtin (1984: 97). Other authors, aware of the problem, prefer to speak, like Thiel (1966: 12), of a ‘secret of the monsoon’, carefully guarded by the Arabs and the Indians, which is not much more satisfactory.

³ Apart from a few modifications, the text and the translation are those in H. Rackham’s edition, *The Loeb Classical Library* (1961).

XXVI [96] Sed priusquam generatim haec persequamur, indicari conuenit quae prodidit Onesicritus classe Alexandri circumuectus in mediterranea Persidis ex India, enarrata proxime a Iuba, deinde eam nauigationem quae his annis compta seruatur hodie....

[100] ... Postea ab Syagro Arabiae promunturio Patalen fauonio, quem hypalum ibi uocant, peti certissimum uidebatur, XIII (centena milia) XXXII (milia) p(assuum) aestimatione.

[101] Secuta aetas propiorem cursum tutioremque iudicauit, si ab eodem promunturio Zigerum portum Indiae peteret, diuque ita nauigatum est, donec compendia inuenit mercator lucroque India admota est: quippe omnibus annis nauigatur....

[104] Indos autem petentibus utilissimum est ab Oceli egredi; inde uento hippalo navigant diebus XL ad primum emporium Indiae Muzirim.

XXVI [96]. But before we go on to a detailed account of these countries, it is suitable to indicate the facts reported by Onesicritus after sailing with the fleet of Alexander round from India to the interior of Persia, and quite recently related in detail by Juba, and then to state the sea route that has been ascertained in recent times and is followed at the present day....

[100] ... Subsequently, it was thought that the safest line was to start from Ras Fartak in Arabia with the fauonius (the native name for which in those parts is Hypalus) and make for Patale, the distance being reckoned at 1,332 miles.

[101] The following period considered it a shorter and safer route to start from the same cape and steer for the Indian harbour of Sigerus, and for a long time this was the course followed, until a merchant discovered a shorter route and the desire for gain brought India nearer; indeed the voyage is made every year....

[104] The most advantageous way of sailing to India is to set out from Ocelis. From that port, it is a 40 days' voyage, with the *Hippalus* blowing, to the first trading station in India, Muziris.

In section 100, I have followed Santo Mazzarino⁴ in adopting the reading *Hypalus*, based on the combined spelling of two manuscripts, rather than the emendation *Hippalus*, which has been wrongly accepted by all editors since Hardouin (1685), who was influenced by the double *p* in *vento hippalo* in section 104. Calling a wind *hypalus* means in Greek that it comes 'from under the sea', and the idea that a wind can begin from the depths of the sea (as others come from the exhalations of the earth) was not strange in Antiquity. Discussing the ways to predict the weather, the Elder Pliny says: 'Often also the sea swells in silence and, blown up in unusually high waves, confesses that the winds are now inside it' (XVIII. 359; trans. H. Rackham). Some winds originate from greater depths than others: for this reason, the *auster* whips up larger waves than the *aquilon* (II. 228). In the seventeenth century, Ralph Bohun, in an interesting *Discourse Concerning the Origin and Properties of*

⁴ Mazzarino (1982-7).

Wind (Oxford, 1671), 10), once again considered the generation of winds by the sea or the land to be one of their several origins. As Mazzarino has pointed out, the idea of wind generated by the sea seems to be suitable for the south-west monsoon, which blows from the open sea.

On the other hand, in section 104 the reading *hippalus* is in all likelihood the correct one. This is because Pliny's text is based on two different sources, which, as was his habit, he transcribed carefully without trying to reconcile them. In section 96 Pliny announces an account divided in two parts. The first derived from Juba (first century BC), who was making use of older sources—probably Nearchus, towards the end of the fourth century, describing the return voyage of Alexander's fleet; the second is a description of the voyage towards south India in the time of Pliny. Thanks to Federico De Romanis, we know that this information was furnished to Pliny by traders between AD 49 and AD 52.⁵ Between these two parts, Pliny inserts, in sections 100–1, six lines to describe two intermediate voyages that went further northwards. The first (section 100) went to the mouth of the Indus, and the other (section 101) to the western coast of the Deccan. The spelling *hypalus*, in section 100, means that this section was coupled with the earlier section (sections 96–9), which pushes back its origin to the Hellenistic sources of Juba. Otherwise, Pliny spells it *hippalus* when he records contemporary information.

In this way Pliny's text helps us trace the transformation of a term that, because its original components were forgotten, was thought to be derived from a proper noun with a similar spelling. So was born the myth of the pilot Hippalus, about whom the author of the *Periplus of the Erythraean Sea*, a Greco-Egyptian merchant who sailed in the middle of the first century AD,⁶ provides us with the other key:

In the past, smaller vessels sailed along the coast from Kanè and Eudaemon Arabia (Aden) following the coastal route that we have just described; the pilot *Hippalus* was the first, after giving thought to the location of the ports and the shape of the sea, to find the route on the high seas. Thereafter, since in this region Etesian winds coming from the sea blow seasonally just as they do in our countries, the south-west wind seems to be called Hippalos after the first navigator to have discovered the direct sea route.⁷

This passage is an obvious clue to understanding Pliny's text and constitutes the basis of the traditional interpretation.

⁵ De Romanis (1988: 5–13).

⁶ See the introduction to Casson's edition (1989), and, for new arguments in favour of a date closer to the middle of the first century AD, Fussman (1991).

⁷ *Periplus*, 57. The text and translation of the second phrase present problems of detail that appear to defy all solution. I have given the most traditional translation of the text. A slightly different version can be found in Casson's edition, but the nuances make no difference to the ideas I have accepted subsequently.

However, while the text indicates that Hippalus must have given his name to the wind used for the crossing, neither the existence of this wind nor the way in which it was used was regarded by the author of the *Periplus* as the discovery of the mythical pilot. His role was that he was the first to open *ton dia pelagous ploun* (or later *ton diaploun*), that is, the crossing of the open sea, after observing neither the south-west nor the north-east monsoon seasons, but the 'location of the ports and the shape of the sea'. Those who wished to interpret this passage as the discovery of the monsoon were obliged to stretch the meaning of the text.⁸ That is true of the two pioneering books by Rawlinson and Charlesworth, whose influence was considerable, in which they claimed that Hippalus had observed the periodicity of the monsoon. A more recent example is the book by Sir Mortimer Wheeler,⁹ another authoritative work, in which he translated *schèma thalassès* as 'the condition of the sea' (although twenty years earlier Warmington had translated the phrase more literally as 'the shape of the sea') and wrote that, 'without [Hippalus'] discovery, or at least his popularization of the monsoon as a dependable aid to deep-sea voyaging, regular trade with India would have been impossible'. In reality, no ancient text has ever said any such thing. To repeat Curtin's particularly scathing criticism: 'The story is obvious Roman ethnocentric nonsense.'¹⁰ But I would add just one correction: it was not the Romans who indulged in such ethnocentric nonsense but modern commentators.

In point of fact, the Greeks knew of the monsoon independently of the mythical feat of Hippalus, and the oldest Greek sources that describe it are concerned not with navigation but with the climate of India. Alexander's army experienced the monsoon while coming down from the Paropamisadae and around Taxila. Aristobulos, who took part in the expedition, made a careful study of its features as early as the end of the fourth century BC. 'In the time of the Etesian winds,' he says, 'the rains pour incessantly and violently from the clouds, both day and night, until the rising of Arcturus' (that is, until mid-September). He also noticed the contrast between the rains of the Himalayan foothills and the drought in Sind. Arrian later showed that Nearchus, while bringing back Alexander's fleet, was held up at Patala on the Indus by the Etesian winds blowing from the south and the open sea, which prevented him from navigating along the Gedrosian coast.¹¹ Nearchus had to wait for the north-east monsoon before he could set sail.

Though the Greeks had experienced right from the start of the Hellenistic era what the *Periplus* considered an example of the Etesian winds specific to

⁸ No doubt carried away by the Latin translation of Muller (Paris, 1853), in which the Greek *schèma* has been translated literally by the Latin *habitus*, leading us to understand 'aspect' rather than 'form' of the sea; see Tchernia (1994: 131–6).

⁹ Rawlinson (1916); Warmington (1928); Wheeler (1954).

¹⁰ Curtin (1984: 97). ¹¹ Aristobulus cited by Strabo, XV. 1, 17; Arrian, *Anab.* VI. 21.

the Indian Ocean, Pliny's text, as well as the description in the *Periplus* of the transition from coastal navigation to ocean navigation and the vague portrayal of the pilot Hippalus, illustrates clearly an important event for Greco-Egyptian traders and sailors: the opening-up of a sea route that no longer went all round the southern coast of Arabia. Instead of just cutting across the Gulf of Oman, it went much more directly towards the Indian coast—either to the Gulf of Cambay or to the Deccan, which meant a long crossing of the open sea—and made possible direct trading between Egypt and India without having to use Arabian ports as transit points.¹²

An Unknown Pilot or Geographical Knowledge?

We need to examine the circumstances that led to the opening of this route.

The winds do not seem to be an essential element. Sailors used them according to the techniques at their disposal. What really makes a navigator venture on the high seas along an uncharted route is the conviction that he will finally reach his destination. This was the real strength of Christopher Columbus, whom no one credits with having discovered the trade winds. Columbus never doubted for a minute that his caravels would land at Cipango or India. As Bartolomeo de Las Casas wrote, 'when he made up his mind, he was as sure of discovering what he discovered and of finding what he found as if he had kept it locked in his room'.¹³ But the author of *Historia de las Indias* hints at several explanations for such a deeply rooted conviction, which have ever since been the subject of endless speculation. Was it his faith in the geographical and cartographic work that was the legacy of Marinus Tyrius—that is, the theories of Pierre d'Ailly, Martin Behaim and especially Toscanelli—that shortened the distance of the western route towards India? Or was it the secret he learnt from an 'unknown pilot'? Columbus' biographers can only speculate between these two possibilities.¹⁴ The ancient sources present the historian of Antiquity with exactly the same kind of choice, only this time he has to choose between two figures: the mythical *Hippalus* or the adventurous explorer Eudoxus of Cyzicus.

When the author of the *Periplus of the Erythraean Sea* specifies that the direct route across the Indian Ocean came to be known after observation of the 'location of the ports and the shape of the sea', he saw a geographical reason for this new sea route. Eratosthenes towards the end of the third century BC, and even Strabo, who relied upon him, thought that the coast

¹² For the 'verrou arabe' and Eudaemon Arabia, see Désanges (1978: 303).

¹³ Cited by Vignaud (1911: ii. 227, n. 457).

¹⁴ Vignaud (1911: ii. 211–33) was the great advocate of the unknown pilot story. Samuel E. Morison (1942: 61–3) stressed the naval implausibility of the episode.

from the mouth of the Indus to Cape Comorin faced squarely south. Modern historians and editors have delighted in tracing on the current map of the Indian Ocean the various sea routes indicated by Pliny and the *Periplus*: the differences and advantages of each are quite obvious. The results of such an exercise would be far less clear on the map of the world as seen by Strabo or even Ptolemy, who, though he was better acquainted with the location of the gulfs of Kutch and Cambay, considered them to be the southernmost extension of India. It is important for our purpose to note that a passage of the *Periplus of the Erythraean Sea* (section 51) locates the cities more accurately than Ptolemy: Paithan is twenty days' journey south from Barygaza, the port on the Gulf of Cambay (the actual distance is about 400 kilometres, which accords with the estimate in the *Periplus*), whereas Ptolemy thought it was a little to the north of Barygaza. Greco-Egyptian sailors and traders, therefore, had an empirical knowledge of the orientation of the Indian peninsula, something most geographers failed to record. Poseidonios was the only one to have correctly oriented the Indian coast along a north-south axis.¹⁵ It is the acquisition of this knowledge with which the *Periplus* credits the pilot Hippalus.

Dihle¹⁶ brought out forcefully what for him was the almost automatic effect on navigation of the knowledge of this north-south orientation of the Indian coast. The advantages of the ocean route became apparent, and sailors no longer feared missing India and getting lost in the vast ocean that covered the end of the earth. He believed that, with the Bactrian Greeks settling in India, such a realization was bound to occur. Right from the early decades of the second century BC, the decline of the Mauryan Empire had made north-west India an easy prey for the Bactrian Greeks. In the middle of the second century BC and the ensuing years, Eukratides, though soon assassinated, and Menander occupied a large part of North India, initiating the creation of a number of Indo-Bactrian kingdoms that flourished for a long time after the fall of Ai-Khanoum in 145 BC.¹⁷ Menander's kingdom spread over Sind, including the Indus ports of Patala, Gujarat, and perhaps Barygaza.¹⁸ Patala and Barygaza were the Indian ports most directly in contact with the Arabian Gulf. Dihle continued with his demonstration by examining the texts for traces or proof of information gathered by the Greeks about the coast further south.

¹⁵ Cited by the Elder Pliny, VI. 57; fr. 212 of the edition of the fragments of Poseidonios by L. Edelstein and I. G. Kidd (1972); see the latter's commentary, pp. 756-7.

¹⁶ Dihle (1974, 1978 (1984: 109-17, 118-52)).

¹⁷ See most recently on this point Rapin (1992); Fussman (1993).

¹⁸ Strabo, XI. 11 (516): according to Apollodorus of Artemita, the Greeks 'occupied not only the region of Patala but also, on the rest of the coast, the kingdom of Saraoste and that of Sigerdis'; *Periplus*, 47: coins of Menander were still present at Barygaza in the middle of the first century AD.

Though such evidence is rather flimsy,¹⁹ the probabilities are in favour of his hypothesis. Trade had already linked north- and south-western India.²⁰ Masters of the main Indus port and of a part—a sizeable part, perhaps—of the coast, the Bactrian Greeks settled in India inevitably came to know of the shores further south, and they perhaps even explored them.

It remains to be ascertained how the geographical information so gathered was transmitted to the Ptolemaic kingdom. Dihle does not address the issue. On the other hand, since he considers this information to be the reason for Eudoxus of Cyzicus' expedition (to which I shall return shortly), Dihle mixes the 'Hippalian' version of direct navigation (and its geographical origins) with that of Poseidonios, for whom the Eudoxus expedition was guided by a shipwrecked Indian. If we believe the evidence of the *Periplus* to be proof enough of the fact that the new geographical knowledge was spread chiefly among traders and navigators, we will have to look at the contacts between people of north Indian and Egyptian harbours.

The *Periplus* (section 26) describes the prosperity of Eudaemon Arabia (Aden) before the time of the direct crossings, when the port acted as a meeting point and warehouse for ships that had set sail from Egypt but were not going to India, and for ships that had left from India but were going no further than the southern coast of Arabia. Once Patala had fallen into the hands of the Greeks, the Indo-Bactrians must have come into contact with the Greco-Egyptians. The transmission of information, therefore, would have been only natural, as well as the desire by the Greeks to avoid Arabian ports and sailors. Exchanges in Greek between Indian and Egyptian traders and navigators led to direct crossings that were attributed later on to the mythical Hippalus.

In contrast with the version that I have reconstructed, Poseidonios, with his strange adventures of Eudoxus of Cyzicus, puts forward the hypothesis of an 'unknown pilot'. Towards the end of the rule of Ptolemy VIII Euergetes (182–116 BC), he recounts, the coast guards of the Red Sea found a shipwrecked Indian at death's door and took him to the king. After learning Greek, he told them that, while sailing from India, his ship had gone off course. All his companions had died of hunger, and he was the only survivor, who ended up somehow at the place where they had found him. Grateful to them for having

¹⁹ Aelian, NA 15, 8, describes the pearl fishery near the city of Perimula in the time of Eukratides. The name of Perimula is mentioned by Pliny as an Indian promontory, VI. 72; while its exact location is difficult to determine, it must be somewhere on the western coast of the Deccan or near Cape Comorin. Ptolemy, I, 7, 6, quotes Diodoros of Samos, of whom little is known otherwise, who fixed the position of the constellations, the Taurus and the Pleiades, for ships sailing from Indikè to Lymirikè (the Malabar Coast). It is the only text that does not appear to include Lymirikè in Indikè, and Dihle sees in this the trace of one of the first exploratory Greek voyages from the Indus to the south of the Indian coast.

²⁰ De Romanis (1982–7: 163–4).

saved his life, he offered to act as 'the guide of the navigators chosen by the king for the crossing to India'. Among those selected was Eudoxus of Cyzicus, who had for some time been part of the king's entourage, and had developed a keen interest, as geographer and ethnographer, in the regions of the Upper Nile. Hence the expedition has come to be named after him.²¹

Many ingredients are common to Eudoxus' adventure and to that of the 'unknown pilot', a story that was current in Hispaniola, and then in Spain, after Columbus' voyages. During Columbus' stay at Madeira, he is said to have met the captain of a ship who, having been swept along by the storm during his voyage from Portugal to England or Flanders, reached a distant western island from where he managed somehow to come back, although very ill. Despite Columbus' ministrations, the unknown pilot died, but, while breathing his last, revealed to Columbus the exact information about his route and the islands he had discovered.

All in all, there are two parallel sets of explanations for the Egypt-India crossing (which, we must not forget, did not lead to a new land) and for the discovery of America. We cannot hope to reconcile them. In fact, if you take an unknown route, there are only two ways of getting to where you want to reach: either you find a guide, or, basing yourself on the information available, you try and work out the direction and the distance. Ancient history sometimes prefers the easy way out, and hence there was an attempt²²—often well received—to combine the two versions by making Hippalus the pilot of Eudoxus' expedition. 'A simple solution, too simple perhaps,' as Raschke wrote, 'and one which can never be verified'.²³ The result of this was muddling up the geographical hypothesis and that of the unknown pilot, both of which had in any case been blurred by the idea of the 'discovery of the monsoon'. By making Hippalus vanish from the history of navigation, Mazzarino excludes this theory, at least in the way it is presented.

New Maritime Routes

The point we need to retain is that there was established, probably during the second half of the second century BC, a sea route across the Indian Ocean. This happened when navigators realized that, by following the same parallel (even Mediterranean sailors knew how to do this by using the stars to navigate²⁴), from the Masirah island (referred to as Sarapis in the *Periplus*, north of which the description of the Arabian coast becomes extremely vague), they could

²¹ Strabo, II. 3, 4. See Thiel (1966) and Désanges (1978: ch. X).

²² Otto and Bengtson (1938); Thiel (1966: 18).

²³ Raschke (1978: 661). ²⁴ Lucan, VIII. 172–85.

enter the Gulf of Cambay, or could go from Cape Guardafui to Lymirikè.²⁵ This crossing had been prepared as early as the second century BC or perhaps even the third century BC by Indian and Arab navigators who had increased the number of sea routes in the northern Indian Ocean. Good evidence for this can be found in Agatharchides' passage about the Fortunate Islands (in all probability Socotra, which is derived from the Sanskrit *Sukhatara dvipa*, 'the most pleasant island'): he regards them as a place where merchant ships met from Persia, Carmania, and neighbouring countries, but mostly from Patala on the Indus. The various routes did not all come into use at the same time: there was a gradually increasing flow of traffic towards south India, where pepper, pearls, and beryls were loaded. But one always sailed with the same wind,²⁶ and the monsoon only regulated the seasonal character of the crossings.

Several accounts attest to the fact that from the end of the second or the beginning of the first century BC relations between India and Egypt were easier and more frequent. It is not true to say that there is a complete absence of Ptolemaic coins in India. Berghaus noticed a few dozen of them, along with coins from Asia Minor, and we must not forget that most were bronze coins that caused less attention and were not as well preserved as gold or silver coins.²⁷ Two amphorae from Arikamedu bearing Cnidian stamps were published recently,²⁸ which probably date from the beginning of the first century BC. Isotopic analysis makes us think that western Mediterranean lead was used in the coins found in Central Deccan before the Satavahanas.²⁹ Finally, it has long been observed that the existence in the Egyptian Thebaid of an 'epistrategos of the Erythraean Sea and the Indian Sea', at the latest in 62 BC (or maybe at the latest in 74/73 BC),³⁰ furnishes a good *terminus ante quem* for Lagid interests in the Indian Ocean.

Strabo, who went to Egypt at the time when Aelius Gallus was the prefect between 27 and 24 BC, spoke eloquently of the second stage in the development of this trade and of the quantitative leap it took after the Roman conquest of Egypt: 'Up to 120 ships make their way under sail from Myos Hormos for India, whereas previously, under the reign of the Ptolemies, very few people dared to launch their ships and trade in Indian goods.'³¹ This is a well-known text, and, though one might have some reservations about the figure of 120 ships, the general tone is quite plausible in the light of the unbridled taste for luxury in Rome and the success that exotic goods—pepper, silk, and pearls in

²⁵ Agatharchides 103 (GGM I, p. 191). See S. M. Burstein's translation and commentary (London: 1989), 169, and for these problems De Romanis (1996a: 142–3).

²⁶ See De Romanis (1982–7: n. 5).

²⁷ See Berghaus (1991: 108). I am grateful to Peter Berghaus for all his clarifications during his visit to Marseilles.

²⁸ Slane (1991).

²⁹ Ray (1991).

³⁰ Mooren (1972).

³¹ II. 5, 12. See also XVII. 1, 13, and De Romanis (1982–7).

particular—enjoyed there. But I believe we can identify, some thirty years after the stage so well described by Strabo, a third phase of trade, that of Italian traders and silver *denarii*, which may be none other than the last of the phases described by Pliny.

MASSIVE OUTFLOW OF MONEY?

The Texts

In 1979, Paul Veyne,³² by way of introduction to his brilliant critique of the theory of an automatic return to equilibrium in international trade, examined the two well-known passages of Pliny the Elder's *Natural History* concerning the haemorrhage of gold: 'In no year does India absorb less than fifty million sesterces of our empire's wealth, sending back merchandise to be sold with us at a hundred times its prime cost' (VI. 26, 101, trans. H. Rackham). 'By the lowest reckoning, India, China, and the Arabian Peninsula take from our Empire 100 million sesterces every year—that is the sum that our luxuries and our women cost us' (XII. 41, 84). Pliny, Veyne explains, was certainly well informed, and his figures, based on the Roman customs revenues, cannot be seriously called into question. But, while keeping in mind the price of eastern merchandise entering the Roman Empire, Pliny did not take into account the price of goods exported to India, since he was not concerned with the problem of balance of trade. He was thinking as a member of a society in which autarky was highly valued. That is why these passages are not reliable to support the argument that the Roman Empire was suffering from a massive haemorrhage of precious metal.

It is difficult to challenge the basic ideas of this argument. However, they can be, and have been, qualified to some extent. As Veyne has shown, Pliny's information could have been based only on what he gathered from the customs services. Ever since the publication of the Vienna papyrus *P. Vindob. G. 40822*,³³ dating from the middle of the second century AD, which has preserved a part of the inventory of an Indian cargo and a part of a loan agreement in connection with its transport, we have evidence that a 25 per cent duty was levied on goods coming from India into Egypt. But we also know that this tax was applied to a conventional price fixed for each product. This was certainly not the price Western traders paid to the Indians, which probably no one on the other side of the Ocean knew exactly. The conventional price must have been closer to the price of the goods at the time

³² Veyne (1979).

³³ Harrauer and Sijpenstein (1985); Thür (1987, 1988); Casson (1990).

they were loaded in Alexandria on Mediterranean ships heading for Rome and the western Mediterranean—in other words, a price much higher than that paid by traders in India. However, custom taxes in the Roman Empire were levied on both imported and exported goods, and there is reason to believe that Pliny's figure was based on the sum of taxes paid on Roman exports, which provided him the information he needed for his purpose. Rather than from the *portorium* accounting offices, he probably retrieved it from the amount paid out for the farming of these taxes: this, as he himself says (VI. 84), was the practice for the *portorium* of the Erythraean Sea.

Bartered goods certainly existed, and the *Periplus* draws up a list of such goods. But, as André and De Romanis have already stressed, the sources leave us in no doubt about the importance of coins in that period. Regarding trade with Arabia, Pliny (VI. 162) makes it clear that the Arabians sold to the Romans and the Parthians without buying anything from them in exchange, and in India there is a Tamil text that speaks of Romans coming with gold and going back with pepper.³⁴ The *Periplus of the Erythraean Sea* mentions gold and silver coins as one of the recommended goods for trade in all the major Indian ports, especially in the southern ones: 'mainly, a great amount of money' (sections 39, 49, 56). I would add that one cannot help comparing Pliny's second text with the letter attributed by Tacitus to the emperor Tiberius, replying to the Senate in AD 22 asking him to decide on the wisdom of promulgating a new sumptuary law (*Ann.* III. 53): 'For on what am I to make my first effort at prohibition and reversion to our ancient standard?... The promiscuous dress of male and female—and especially the female extravagance by which, for the sake of jewels, our wealth is transported to alien or hostile countries?' Like Tiberius, Pliny too associated the luxury of jewels with the idea of a massive outflow of money, and, while deploring this fact, launched a scathing attack against women. Either Pliny was directly influenced by an idea actually expressed in Tiberius' discourse, or it was a *topos* widely used in the middle decades of the first century, or more precisely, an adaptation of an old *topos* on luxury and autarky to a particular set of circumstances. But in one sense Tiberius was more specific than Pliny: while the latter gives a figure in sesterces alone, which makes one think that he took into account only the value of imports, Tiberius said *pecuniae nostrae transferuntur*—in other words, it really was a question of money and the transfer of coins. Clearly both Tiberius and Pliny felt, rightly or wrongly, that there was a haemorrhage to the east of silver *denarii* and *aurei* from the Roman Empire.

³⁴ André and Filliozat (1980: 135); De Romanis (1982–7: 199).

Numismatic Discoveries

About 6,000 Roman *denarii* and over 1,000 *aurei* have been found in India. This is not an extraordinary figure, since, for instance, about 25,000 republican *denarii* were found in Dacia. But the Roman coins that have come to the knowledge of scholars in India are a mere fraction of the actual number of coins discovered, most of which were melted down. The distribution of the dates of issue, especially for the *denarii*, is very specific and has given rise to an interesting debate.

Out of the 6,000 coins, only one is later than the debasement of weight and fineness by Nero in AD 64. In all hoards, coins of the last issue of Augustus, bearing the effigy of *C. Caesar* and *L. Caesar*, which were minted in Lyons from AD 2 onwards, and the single issue of Tiberius, constitute the overwhelming majority. Bolin added that the coins found in India were in such good condition that they could not have circulated in the Empire: according to him, the coins must have been sent when they had just been struck. Going one step further, Crawford has suggested more recently that only members of the imperial family, or at least high-ranking figures, who were in direct contact with workshops where the coins were struck, could have organized this transfer of coins.³⁵ Recent numismatic research,³⁶ however, does not corroborate this provocative and stimulating hypothesis. It is not true that the Roman *denarii* and *aurei* found in India were all unworn coins; most are worn, although some are in very good condition. And in the rare cases where a study has been made, there are no die links that ought to exist if Bolin's and Crawford's theories were true. We will thus have to find another explanation for the abnormal composition of the hoards found in India, of which McDowall has made a careful study. The paucity of coins of Caligula's, Claudius', or Nero's first issue is no more marked in India than in other hoards of the Roman West; on the other hand, the small number of coins of the end of the Republic and the absence of those of Mark Antony, which continued to circulate in large numbers in the Empire, are quite surprising. By establishing a relation between the purity of the silver in the coins and their presence in India, McDowall has gone to the root of the problem. The finer coins—those dating from the end of the reign of Augustus and the Julio-Claudian dynasty until Nero's reform—are the most numerous. Coins from the end of the Republic, which are less fine, are not as frequent, and there are no others, neither those of Mark Antony, which have only 90 per cent silver, nor those after Nero's reform, which have only 93.5 per cent silver.

³⁵ Bolin (1958: 72–7); Crawford (1980: 207–8).

³⁶ The following pages are based mainly on Berghaus (1991: 108–21; 1992: 226–7 (with a more complete bibliography); 1993: 547–9); also Turner (1989); McDowall (1990, 1991); Gupta (1991).

This relationship between the purity of the coins and their presence in India is clarified by De Romanis's observations on the numismatic culture of the Sinhalese and Indian elite and professional moneychangers, who were experts in *rūpasutta* the science of coinage, which was a part of daily life in India.³⁷ Moneychangers accepted only *denarii* of the best quality. Sture Bolin had already compared the absence of *denarii* of the Flavian era in Germany and India, and assumed that the debasement had led foreigners to refuse the new coins. The difference is that in Germany the *denarii* came back into circulation after Trajan because, Bolin says, the Germans had no choice. In India, on the contrary, silver *denarii* were completely discredited, and only *aurei* continued to arrive. Although their weight, like that of the *denarii* had been reduced, they retained the same purity. Their circulation did fall off for a while, but they were reintroduced in large numbers under Antoninus Pius, as Berghaus has shown.

McDowall also put forward the paradoxical theory (inspired by Bolin's theory on Germany) that nearly all of the Roman *denarii* must have come into India after Nero's reform, where it was particularly in the interest of Roman merchants to use them as articles of trade. This theory has been partly confirmed by the most recent information with which Berghaus has provided us. In the Budinatham hoard (Tamilnadu, a district of Coimbatore), one of the worn *denarii* of Augustus bore a countermark of Vespasian. This could have come to India only after the beginning of the Flavian period. But two hoards have recently also been discovered that consist entirely of Republican *denarii* and *denarii* of the *C.* and *L. Caesar* type, all extremely well preserved: they arrived in the time of Augustus. This leads us to the plausible conclusion that Roman coins began to be used in India in large numbers in the last decade of Augustus' rule, first the *denarii* then, particularly from Caligula's reign, the *aurei*. The date of the *Periplus of the Erythraean Sea* which was certainly written before AD 70 and more likely at around the middle of the century, and Tiberius' speech in Tacitus' *Annales*, prevent us in any case from dating all Indian hoards late. The pre-Neronian *denarii*, selected by merchants after Nero's reform, continued to arrive for a time—perhaps a very short time—when they could be found, but certainly not after Trajan, who withdrew them from circulation. After that the *aurei* were the only coins to be traded, even if in fluctuating quantities.

Lo Cascio,³⁸ who has made a more general study of the effect of Gresham's Law after Nero's devaluation, noticed the paucity within the Empire of *denarii* from Augustus, Tiberius, Caligula, and Claudius in the hoards during the Flavian era, whereas there was a large number of Republican *denarii*. The best coins, he wrote, must have disappeared, either melted or sent abroad; the

³⁷ De Romanis (1988: 31–3).

³⁸ Lo Cascio (1980: 445–70).

hoards contained the next best available, which were preferable, despite being worn, to coins issued after the reform. The composition of the Indian hoards is practically the reverse of what Lo Cascio has described, and one cannot help thinking that the skill of the Indian moneychangers had something to do with it, and that a substantial number of the missing *denarii* of Augustus and Tiberius found their way to the East.

A Turning Point: The End of Augustus' Reign

For my purpose, I accept that in the decade before the rule of Tiberius a substantial transfer of Roman *denarii* to the other side of the ocean took place. It seems plausible that about fifteen years later Tiberius became worried and referred the matter to the Senate. In addition, the great majority of the *denarii* have been found mainly in and around the district of Coimbatore. By means of the Ponnani and Cauvery river basins, the district links the Malabar to the Coromandel Coast, the Cera to the Cola kingdom—a geographic advantage that may well explain this concentration. But there is another explanation, which has long been known: the largest Indian beryl mine is located in this area, at Padiyar near Dharapuram. Another *denarii* hoard, found a little further to the north-east, at Koneripatty, is close to another beryl mine, the Vanayibadi mine.³⁹ The *Periplus* mentions beryl among articles exported from Muziris, the major port on the Malabar coast. Here we have a concrete example, perhaps, of Tiberius' remarks linking the export of coins to the luxury of jewels.

A third kind of evidence also points to the end of Augustus' or Tiberius' rule. On the caravan route from the Nile to Berenice, a Red Sea port at the southern extremity of Egypt, the walls of Wadi Menih's rock shelter bear numerous inscriptions, among which are two Latin inscriptions. The first reads 'C. Numidius Eros, on returning from India, stopped there in the month of Pamenoth [between 25 February and 26 March] in the twenty-eighth year of the rule of Augustus [2 BC]'; the second, 'I, Lysas, slave of P. Annius Plocamus, came here on the third day before the nones of July in the thirty-fifth year of the rule of Augustus (AD 6 July 5)'.⁴⁰ On another rock wall covered with Greek inscriptions and hieroglyphics, in the valley of Wadi Hammamat, between the Nile and the port of Myos Hormos, there are only four Latin inscriptions: three of soldiers and one of a certain C. *Peticus* who belonged to a merchant family of the Marsi region in Central Italy, and who was probably accompanying a caravan bound for the East or on its way back.⁴¹

³⁹ For the beryl mines, see Warmington (1928: 250–1), Wheeler (1954: 145), and De Romanis (1982–7: 165–9).

⁴⁰ For these inscriptions, see De Romanis (1996a: 203–17) [and Cuvigny and Bülow-Jacobsen (1999)]. ⁴¹ See Ch. 13.

This inscription is not dated, but all the dated inscriptions in the rock shelter are after AD 9, and the majority belong to the rule of Tiberius. In a book just published, De Romanis provides us with a few more new inscriptions along the same lines⁴²—namely, the presence of Italian citizens, slaves, or freedmen on the routes of the eastern Egyptian desert in the very last years of the first century BC or in the first years of the next century. Though only a handful of such inscriptions have been found so far, one is bound to note that they date from only a few years earlier than the oldest *denarii* hoards discovered in India.

The active role played by these Italian merchants in eastern trade clears up the paradox of the massive influx to India of *denarii* that were out of circulation in Egypt, compared to the paucity of coins minted in Roman Egypt. We must also remember that, in the thirty years that followed the sudden acceleration of trade noticed by Strabo between 27 and 24 BC, very few coins arrived in India. It is likely, therefore, that other articles were traded. Strabo, on the other hand, attributes the increase in trade to Alexandrian merchants. A new transformation of a very special type must have taken place in the period from the last few years of the first century BC and the following fifteen years. Three clues, in less than thirty years, point to this conclusion. They are, in chronological order, (1) the names left behind in the Egyptian desert by Italian traders, (2) the *denarii* of Augustus, followed by those of Tiberius in south India, and (3) the Emperor's fears about the drain of coins to the east.

In a distant 'cross-cultural trade' (to use the title of Curtin's book), both sides play on their differences to obtain what each thinks are the most favourable terms of trade. A good example of this was the coral plundered by Roman merchants to be shipped off to India; soon there was no more coral left on the Mediterranean market, for the Indians were willing to pay a much higher price for it than the inhabitants of the Empire.⁴³ De Romanis, confirming Pliny, showed that this article was considered a sacred gift, and, even in the first half of the sixteenth century, coral remained the most profitable item of trade for Westerners.⁴⁴ When Italian merchants took over trade with south India, they were quick to realize that *denarii* too could secure for them good terms of trade.

Various Systems of Exchange

This process was confined for the most part to a specific group of actors, regions, and periods. There is only one Indian hoard in which we find both

⁴² De Romanis (1996a: 203–59).

⁴³ Pliny, XXXII. 21–3.

⁴⁴ De Romanis (1988: 38–43); see also Vilar (1974: 119–23).

gold and silver coins—proof that each one had a different role to play. Though the maps showing the distribution of archeological material in India have to be viewed with a great deal of caution, since the excavations for the period of interest to us are still very few in number, the inferences we can draw are suggestive. Vimala Begley⁴⁵ recently made a study of ‘rouletted ware’, a ceramic made in all likelihood in south-east India between the second century BC and the second century AD, the bottom of which is ornamented with guilloche. This pottery is spread over the Coromandel Coast as far as Orissa, and travelled up the rivers to Nashik and Nevasa among the Andhras. ‘Rouletted ware’ is found, on several sites on the Coromandel Coast, but also at Chandravalli, Ter, and Nevasa among the Andhras, side by side with Roman amphora fragments (and even more so at Arikamedu, the only place where excavations have been carried out on a large scale). On the other hand, wherever *denarii* hoards are most frequently found, in Kerala and the Coimbatore district, ‘rouletted ware’ and Roman amphorae are for the moment absent.⁴⁶ Everything seems to suggest that the same articles of trade were not selected in the regions west and east of the southern part of the Deccan. Karur is the only site where *denarii* hoards, ‘rouletted ware’, and several (or a single) Roman amphora fragments have been discovered at the same time. The Cera capital appears to have acted as bridge between two different trading systems (Fig. 14.1). This does not mean that Italian merchants used only *denarii*, or later *aurei*, as means of exchange, nor that they specially sought beryl. The use of coral, as we have seen, proves the opposite—so, too, does the presence of Italian wine amphorae at Arikamedu and Nevasa, which can be compared to the bas-relief of a dromedary carrying amphorae found at L’Aquila in central Italy, which I believe can be attributed to the tomb of the Peticii, the Italian trading family who left an inscription in Egypt.⁴⁷ But it appears to me that in India the various goods moved along different routes and different networks.

A similar demonstration is possible in other regions. In Gujarat, for instance, there appears to be a larger concentration than elsewhere of sites with Roman amphora fragments (about which we know precious little), although until now only four or five isolated coins at the most have been found dating before the second century AD. The *Periplus* does not give a different picture: trade was not carried out in the same way in Barbarikon in Sind, where all merchandise went up to the king in his metropolis, Minnagar, as in Barygaza and in the southern ports, Muziris and Bakare.

⁴⁵ Begley (1991: 157–96).

⁴⁶ No *denarii* hoards have been found on the eastern coast, only a few isolated coins: two at Arikamedu, one at Mambalam near Madras, and a few more on the Andhra Pradesh coast.

⁴⁷ See Ch. 13.

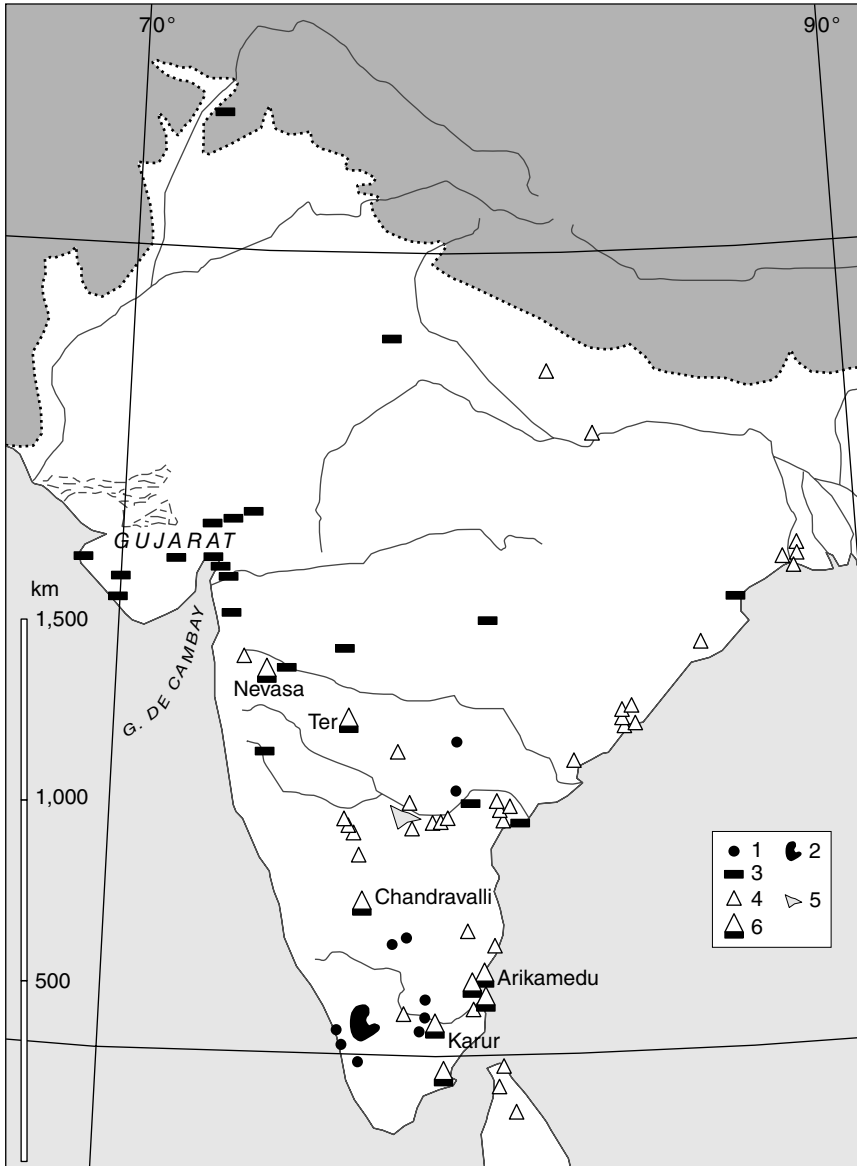


Fig. 14.1. Hoard of *denarii* and Mediterranean amphorae in India: 1 *Denarii* hoards, single site. 2 *Denarii* hoards, eight sites. 3 Greek or Roman amphora sherds. 4 Rouletted ware, single site. 5 Rouletted ware, eight sites. 6 Amphora sherds and rouletted ware on the same site.

And their Consequences in Rome

In short, commerce between Rome and India did not constitute a single system; it was compartmentalized both in space and in time, for reasons that have to do primarily with the way Western merchants and the articles of trade they had to offer were received in the different regions of India, and it is these differences and developments that we should be looking at in the future.⁴⁸ When Pliny discusses Roman trade with the Orient, the things that are least understood are not his statements referring to the export of 50 million or 100 million sesterces, but the *omnibus annis* and the *nullo anno minus* to which period of time 'every year' should apply? There is nothing that enables us to state that it holds true for the entire period of the Roman Empire. The haemorrhage of the *denarii* continued for perhaps a century, but the *aurei* did not arrive as early as the *denarii*. In the following period, Berghaus has noted the paucity of Trajanic and Hadrianic *aurei* in contrast with the six hoards containing the coins of Antoninus Pius, and later the complete interruption of the arrival of gold after Severus, which was not resumed before the *solidi* of Honorius (AD 395–423). We find the same acceleration and deceleration in the flight of precious metals from the West to the East during the Renaissance and Modern Times: a large amount of gold left in the sixteenth century, less towards the end of that century and the first half of the seventeenth century, and a great deal of silver in the second half of the seventeenth century.⁴⁹ On the whole, Pliny's statements cannot be used as basis for a theory of the long-term economic effects of the drain of precious metals to the East for the simple reason that it was not a continuous drain, and that, apart from Pliny's account, the fluctuations can be seen only in numismatic discoveries, which do not permit us to put a figure to them.

On the other hand, we can speculate about the short-term effects.

Elsewhere,⁵⁰ Federico De Romanis has brought out clearly the social consequences of the unbridled taste for ostentatious luxury: the not-so-rich senators simply could not maintain the style of living of the wealthier ones, which is why, between AD 16 and 22, they tried in vain to reintroduce sumptuary laws. De Romanis has also analysed how eastern commerce and the considerable resources it brought into play might have caused the monetary crisis of AD 33. Apart from the haemorrhage of coin, the *portorium* revenue of the Erythraean Sea produced a sizeable income for the public

⁴⁸ For the differences in the economic and social conditions of the various regions in India affected by Roman trade, and for the impact these conditions had on trade, see now Thapar (1992: esp. 9–19).

⁴⁹ Vilar (1974: 120–2). These variations are due to the wild fluctuations of precious metals prices in the West during that period.

⁵⁰ De Romanis (1982; 1987: 199–209).

treasury (an idea closely akin to the explanation given by Tacitus), and the capital invested in luxury trade became much greater. This contributed to the creation of a difficult financial situation aggravated (or caused?) by the special measures to deal with it described by Tacitus (*Ann.* VI. 15–17), Suetonius (*Tib.* 48), and Cassius Dio (LVIII, 21, 1–5). Assessments can differ as to the significance of each of the various factors that led to this crisis.⁵¹ Here I simply wish to clarify a point, which is similar to De Romanis's last argument.

The most baffling aspect of the account of this crisis was that it was triggered off by the re-enactment of one of Caesar's laws fixing a maximum ratio between the two conventional components of large fortunes in Rome: money lent on interest and property ownership. The law had ceased to be applied. Tacitus, the only one to describe closely the unfolding of the crisis, believed that the host of informers who suddenly mounted a strong attack against those who carelessly broke the law were those behind its reactivation. Rodewald, preferring to rely on Cassius Dio, believes that Tiberius himself must have brought this law back into force, since he was keen to restore solid Republican virtues, but failed to assess correctly the consequences of his decision.

Let us take for granted two things, which in my view are supported by a large number of texts: first, that the general practice in Roman Italy was to finance any commercial enterprise, especially if it concerned sea trade, by raising a loan; secondly, that the financial strategy of senators was restricted mainly to a choice between purchasing agricultural land (possibly residential property that could be put to rent) and lending money on interest. When Italian merchants decided to launch into trading the products that came all the way from India, more and more people began asking for loans; and, despite the risks involved, it appears the profits from such trade were nothing short of spectacular, which sent interest rates soaring. Accordingly, senators revised their financial strategy by favouring moneylending to the detriment of landed estate, a clear departure from traditional behaviour. These excesses certainly attracted attention, and they provided ammunition either for 'professional' informers and moralists of all kinds or for Tiberius with his morose temperament. This explanation of the starting point of the crisis of AD 33 concludes my account of one episode (among others) of Indo-Roman trade, several characteristics of which I have tried to identify.

[For a survey of recent research on the problems dealt with in this chapter, see Tomber (2008), which gives a thorough account of new archaeological work and an updated distribution map of Roman amphorae in India (p. 127, fig. 21).

⁵¹ See most recently Rodewald (1976); Cascio (1978a: 241–61; 1978b: 201–2); Crawford (1986: 122–3, app. 6), [and ch. 9].

A discussion of the Periplus of the Erythraean Sea was published in 2012 by Boussac, Salles, and Yon. On papyrus SB, XVIII, 13167, see Rathbone (2000), Morelli (2011), and De Romanis (2012). For more general information, see Indo-Roman Trade Bibliography, compiled by Andrew Wilson, in The Oxford Roman Economy Project.]

D. Caecilius Hospitalis and M. Iulius Hermesianus (*CIL* VI. 1625b and 20742)

D. CAECILIUS HOSPITALIS

A marble base found in Rome bears a dedication to M. Petronius Honoratus, a prefect of the *annona* (probably from AD 144 to 146),¹ engraved in honour of their patron by the *negotiatores ol[eari] ex Baetica, curatoribu[s] Cassio Faus[to], Caecilio Ho...*² The ending of the last *cognomen*, which has been obliterated, has always been reconstituted as *Ho[norato]*. However, from the amphorae in Monte Testaccio and an inscription from *Astigi*, we know there was a D. Caecilius Hospitalis living at that time, who can only have been a dealer in olive oil from Baetica. His is the only name on six amphora fragments, on two of which the consular date of 145 figures and on another two, 147;³ on one other fragment, the name is associated with that of D. Caecilius Onesimus, and on seventeen fragments, six of which date from 154, with D. Caecilius Maternus.⁴ He was thus active at the time when the dedication was engraved; and there can be no doubt that it is his name, *Caecilio Ho[spitale]*, that must be restored in the last line of the inscription. It should be added that, though no Cassius Faustus is known to us from Monte Testaccio, the family name Cassius is well represented on eighteen of its sherds, one dating from 149 and two from 154.⁵

In Baetica itself, at *Astigi* on the River Genil, which is the town most often referred to on Monte Testaccio amphorae as the loading point, another stone

First published in *Producción y comercio del aceite en la antigüedad: Primer congreso internacional* (Madrid: Universidad Complutense, 1981), 155–60. A section on the meaning of the word *diffusor* was rendered obsolete by the publication of a new inscription from Seville (*AE* (2001), 118) and has been omitted. On the coincidental relationship between this article and a publication by Silvio Panciera, see n. 26.

¹ Pavis d'Escurac (1976: 343–4).

² *CIL* VI. 1625b = *ILS* 1340.

³ *CIL* XV. 3762–4; Rodríguez Almeida (1974–5: 206–7).

⁴ *CIL* XV. 3769–81; Rodríguez Almeida (1972: 164–5; 1974–5: 207–8).

⁵ *CIL* XV. 3804–9.

inscription makes mention of D. Caecilius Hospitalis. Along with Caecilia D. f. Materna and Caecilia Philete, he erected a silver statue to *Pietas* in the names of Caecilia Trophime and her husband, Caecilius Silo, of whom all three were joint heirs.⁶ All sorts of hypotheses might be devised about the kinship links among the D. Caecilii. For instance, Caecilia Materna might be the daughter of Maternus, the associate of Hospitalis at Monte Testaccio; she could have inherited from a childless uncle, and if Hospitalis, her co-heir, was her brother, then he was an associate of his own father. Emilio Rodríguez Almeida has kindly confirmed for me the plausibility of such an association: it is attested at Monte Testaccio itself by an unpublished inscription bearing the names of Caecilius Onesimus and Caecilia Charitosa *filia* as well as by inscriptions of the *S(ociorum) IIII Pomp(eiorum) Corneliani patris et filiorum*.⁷ D. Caecilius Hospitalis now stands out as one of the best known of the oil dealers whose names have come down to us from amphorae and stone inscriptions. Though he was Spanish and lived in *Astigi*, he nonetheless spent some time in Rome in the years after 147, no doubt looking after the family's commercial affairs. The D. Caecilii were one of the most powerful dynasties that we know of in the oil business, making and unmaking temporary associations among members of their *gens* and their freedmen; and through these associations we can discern the family unity, reinforced by bonds such as those exemplified in the *Astigi* inscription by the marriage of Caecilia Philete and Caecilius Silo. The name of the D. Caecilii figures on an amphora from before 79 found at Pompeii.⁸ D. Caecilius Hospitalis was thus the heir to more than sixty years of trading in Baetican oil.

INSCRIPTIONS ON AMPHORAE FROM MONTE TESTACCIO AND ON STONE

I give here the brief list of people known to us both from the amphorae on Monte Testaccio and from stone inscriptions. There are those whose activity is explicitly indicated: P. Olitius Apollonius, a *sevir augustalis*, was a ship operator at *Narbo*;⁹ L. Marius Phoebus, *viator tribunicius*, was a *mercator olei hispani ex provincia Baetica* in Rome.¹⁰ Sex. Fadius Secundus Musa¹¹ was, like

⁶ CIL II. 1474. ⁷ CIL XV. 3984–5.

⁸ CIL IV, suppl. 3, 9480. Cf. Tchernia (1964), a fine example of naive anachronism in interpreting family associations [*and pp. 54–7*].

⁹ CIL XV. 3974–5 and CIL XII. 4406.

¹⁰ CIL XV. 3943–59 and CIL VI. 1935 = ILS 7489. [*L. Marius Phoebus is also attested in Baetica, in an inscription held by the museum of Córdoba: Remesal Rodríguez (2000); CIL II. 7, 544.*]

¹¹ CIL XV. 3863–73 and CIL XII. 4393 = ILS 7259; see Héron de Villefosse (1914). [*Most recently on the merchants and shipowners from Narbo, see Christol (2008), 288–91.*]

P. Olitius Apollonius, a man from *Narbo*, but he was an important member of the municipal nobility¹² and probably a ship operator like his compatriot. The amphora with the names of the *Fulviorum II Charisianorum et Rogati*¹³ takes us back to Spain, more exactly to *Arva*, situated in one of the great olive-growing centres,¹⁴ where some *centuriae* made a dedication to Q. Fulvius Carisianus, who was a pontiff of *Arva* and their patron.¹⁵ Dressel disagreed with this identification made between the two, presumably because Hübner, judging by the quality of the lettering, dated the *Arva* inscription to a time closer to the reign of Trajan, whereas the location at which the amphora was found in Monte Testaccio dates it to Marcus Aurelius or the early years of Commodus. It is, however, difficult to see lettering as a reliable criterion, when we can say for certain that, in the *CIL*, the *cognomen* Charisianus is known only from these two inscriptions¹⁶ and that there is every likelihood that an important oil trader will be discovered in *Arva*, as in *Astigi*. The least that can be said is that we are dealing here with members of the same family.

The final case raises problems that are slightly more complex. Once again in *Astigi*, M. Iulius Hermes Frontinianus and M. Iulius Hermesianus made a dedication to their father and grandfather, who bore the same name as his grandson, M. Iulius Hermesianus.¹⁷ There is no indication of the pair's occupation; but we do know that the dedicatee, M. Iulius Hermesianus the elder, was a *diffusor olearius*. Given that M. Iulius Hermes Frontinianus' father was active in the Baetica oil business, we can confidently identify him as the M. Iulius Hermes whose name is painted on an amphora from Monte Testaccio.¹⁸

¹² Mistakenly seen for a long time as a freedman; see Cels (1978).

¹³ *CIL*, XV, 3876. The inscription is not entirely clear: both in painted inscriptions and on the stamps of Dr 20 amphorae, when the plural form of the family name is preceded by the figure *II*, it is followed by the two *cognomina* of the particular members of the *gens*. Should we conclude that there were two Fulvii with the *cognomen* Charisianus and that *II* is a mistake for *III*? Or is it the genitive plural of Charisianus that is an erroneous analogy with the ending of *Fulviorum*?

¹⁴ Modern-day El Castillejo; see Ponsich (1974: 155–68).

¹⁵ *CIL* II. 1064 = *ILS* 6919. The *centuriae* are a mystery. Dessau suggests they were types of tribes in the *municipium* of *Arva*.

¹⁶ Charisianus is found once as a family name: *CIL* VI. 29565.

¹⁷ *CIL* II. 1481.

¹⁸ *CIL* XV. 3897. It would be possible to draw other parallels with the Baetican epigraphy, though they would be more debatable: Q. Ennius Ennianus of *Hispalis* (*CIL* II. 1195) is probably related to the C. Ennius Ennianus whose name is inscribed on an amphora from the 'Orti Torlonia' (*CIL* XV. 3852); it is a *cognomen* attested in only eight inscriptions (Kajanto 1965: 146). The L. Aelius Optatus of *Ulia*, under Alexander Severus (*CIL* II. 1533), may be a descendant of the traders of the same name whom we know from Monte Testaccio in the Antonine period (*CIL* XV. 3693–3694; cf. Thevenot 1952). Dressel noted all possible coincidences between names in capital letters on amphorae at Monte Testaccio and the inscriptions in the *CIL* II; the list can be seen in Héron de Villefosse (1914: 174).

M. IULIUS HERMESIANUS IN ROME

Here a second instance of epigraphic chance occurs. A modest funerary inscription found in Rome bears the following text: *D(is) M(anibus)/Iuliae Zotice/vix(it) ann(is) XXVIII/M. Iul(ius) Hermesianus/lib(ertae) bene meritae*.¹⁹ To state that this refers to one of the pair of M. Iulii Hermesiani from *Astigi*, whether the grandfather or the grandson, would be out of the question, were it not for the fact that a thorough search of the *indices* of the *CIL* shows that the *cognomen* Hermesianus figures in them a mere three times, two of which are in the inscription from *Astigi*, and the other in the inscription from Rome just quoted.²⁰ This makes compelling evidence for identification. If one had to choose between the grandfather and the grandson, or perhaps among other Hermesiani of the same family, my own preference would naturally go to the *diffusor olearius*: the inscription at *CIL* VI would testify to his having been active at the arrival point of a trade in which his son, as well as other Iulii from *Astigi*, also engaged, or would engage.²¹

CONCLUSION

Two families (in the broad sense of the term) of traders in Baetican oil each sent one of their members to stay in Rome for a time. There is a strong likelihood that D. Caecilius Hospitalis, who was able to arrange for the erection of a statue or a monument, and M. Iulius Hermes, who buried his freedwoman in Rome, may have been in the city for longer than a passing visit.

The same family names, often preceded by the same forenames, often turn up on sherds at Monte Testaccio.²² The D. Caecilii were far from the only ones to run a family business, a mode of association that seems in fact to have dominated the trade in oil from Baetica. Such businesses required agents at the points of arrival and sale for the goods exported. The two mosaics in the Piazzale delle Corporazione showing ships laden with spherical amphorae are evidence, despite the lack of inscriptions, for the existence of a *statio* at Ostia.²³ The role played by agents, especially in financial matters, was crucial; and how to control them was one of the greatest difficulties faced by any trading

¹⁹ *CIL* VI. 20742.

²⁰ The closest known *cognomen* is Hermetianus, attested three times: *CIL* III. 8364; IX. 24, *add.*; X. 5936.

²¹ *CIL*. XV. 3894, 3901.

²² See the handy list drawn up by Rodríguez Almeida (1972: 130–7).

²³ Becatti (1961: pl. CLXXXII, n. 127).

organization.²⁴ A simple solution was to use family members. As one of the companions of Trimalchio says, voicing the most trivial of popular wisdoms, nothing is stronger than the ties of blood, and let us beware of other people: *Longe fugit quisquis suos fugit... Numquam autem recte faciet qui cito credit, utique homo negotians.*²⁵ (He that flies from his own family has far to travel... A man who is ready to believe what is told him will never do well, especially a business man) (trans. M. Hesletine; rev. E. H. Warmington). So some of these traders, while presumably not being navigators, were travellers who may have lived for long periods away from their native country. If we were to pursue this line of enquiry, one matter requiring elucidation would be why family businesses so frequently felt the need to establish *societates* among their members, and at times among different families, alliances that seem, in general, to have been quite short-lived.²⁶

[The chronology of the M. Iulii Hermesiani and Hermes dynasty was established by Rodríguez Almeida from the locations at which sherds bearing their names were discovered on Monte Testaccio.²⁷ The earliest member was active in the time of Antoninus and Marcus Aurelius. Hermes Frontinianus dates from the Severan period (evidence from an amphora from Mainz bearing his name suggests probably some time after the early third century²⁸), while the second Hermesianus was one of the traders whose names are linked to the reign of Alexander Severus. More recently, Michel Christol has arrived at possible biographical dates for them: AD 130–200 for the first; 160–225 for the second; and 190–240 for the third.²⁹ An inscription from Seville published in 2001³⁰ describes M. Iulius Hermesianus (senior) as *diffusor olearius ad annonam urbis and curator corporis oleariorum*. It leaves no further room for doubt about the links between the *diffusores* and the *annona* or about the eminent position they enjoyed among the oil traders of Baetica.³¹ Moreover, the first inscription mentions that the statue dedicated at Astigi to Hermesianus (senior) stood on a site given by the *ordo*,³² which means he and his son were outstanding personages in the colony.

²⁴ 'Because of the slowness of communications a great stumbling block was the control of agents abroad' (De Roover 1974: 74), speaking of Florentine companies in the fourteenth century.

²⁵ Petronius, XLIII. 6. [For more modern language, see Frier and Kehoe (2007: 126–34).]

²⁶ This article was ready for the press when I heard an outstanding paper read by Silvio Panciera on the *olearii* of Rome, at a symposium on seaborne trade held at the American Academy of Rome. He made the same deductive identifications from the two inscriptions *CIL* VI. 1625 b, 20742, while adding much information (Panciera 1980).

²⁷ Rodríguez Almeida (1990, 1991).g

²⁸ Ehmig (1998).

²⁹ Christol (2008: 281).

³⁰ Chic García et al. (2001); AE (2001: 118).

³¹ See Ch. 2, n. 81.

³² *Accepto loco ab splendissimo ordine asti(gitanorum)*. Cf. Granino Cecere (1994: 714); Tran (2006: 256).

Chic García and Remesal³³ have correctly remarked that Maternus is still attested on Monte Testaccio in 160 and that it is implausible to see him as the father of Hospitalis. Remesal adds that, in his view, Hospitalis was a freedman, for, unlike Materna, he makes no statement about his filiation. However, the name Hospitalis was very rarely a slave's name (a single freedman out of thirty-six occurrences in Kajanto³⁴); and Materna's stating filiation was of use to her in claiming her connection with the D. Caecilii and not with anyone else.³⁵ I continue to believe that the curator of the dedication to the prefect of the annona was probably of free birth.³⁶ Philete, on the other hand, can only be a freedwoman. I venture to suggest a rather rash hypothesis that differs from those argued by Remesal: my view now is that Trophime and Silo were a freed couple, childless but wealthy. Silo died before Trophime, who had three joint heirs whom she required to raise a silver statue to the pietas Augusti, in accordance with the imperial cult observed in Astigi.³⁷ One of her three joint heirs was the daughter of Maternus, an important trader of Baetica; another one was often associated with her father, being no doubt an even more important trader; and the third was a freedwoman. I posit that, at the time of her freeing, Trophime was a *serva communis* of Hospitalis and Maternus. By law, at least half of her fortune would fall to them. Maternus died (the inscription therefore dates from after 160), and his share of the inheritance of Trophime devolved to his heir, his daughter Materna. Hospitalis, grown old, had retired to live in his own country after having lived in Rome. Philete had been designated by Trophime, whose freedwoman she was, as a beneficiary of whatever share in the legacy the law ultimately allowed her. In this way, if my hypothetical reconstruction is accepted, it can be seen how the economic success of freedmen, even when they were free to conduct their own business, was eventually a source of profits for the families of their former masters.]

³³ Chic García (1987–8: 37)1; Remesal Rodríguez (1989: 500–1).

³⁴ Kajanto (1965: 306).

³⁵ The only traders' names painted on Dr 20 amphorae with a statement of filiation belong to three women: Atiliae T. f. Pa... (Étienne and Mayet 2004: no. 98 = CIL XV. 3742), Corneliae Q. f. Placidiae (Étienne and Mayet 2004: no. 181 = CIL XV. 3845–7) and Trentiae P. f (Étienne and Mayet 2004: no. 366).

³⁶ Cf. Bang (2008: 274).

³⁷ Chic García (1987–8).

Delivery of Oil from Baetica to the *limes* in Germania

Wierschowski versus Remesal

With a title that hints at the broader matter of supplies for the Roman army during the early Empire, Lothar Wierschowski, the author of an important monograph on the economic role of the army (1984), has just published a thorough discussion¹ of quite an old book by José Remesal Rodríguez, *La annona militaris y la exportación de aceite bético a Germania* (Madrid, 1986), translated into German in 1997.² At the conclusion of his examination of the work, Wierschowski makes a sweeping pronouncement: ‘The state-organized system of barter between Baetica and the Germanic provinces for provisioning the army with olive oil assumed by Remesal Rodríguez did not in fact exist.’³

Let us give a very brief summary. According to José Remesal, the army was supplied, long before the founding of the *annona militaris*, via the prefect of the *annona* proper. The oil amphorae from Baetica (Oberaden 83s and Dr. 20s), found in such abundance in the forts along the Germanic *limes*, were part of a tribute in kind paid by Baetica; they were transported by private ship operators in the employ of the state⁴ and supplied to the troops in exchange for sums docked from their pay.

First published in L. Rivet and M. Sciallano (eds), *Vivre, produire et échanger: Reflets méditerranéens. Mélanges offerts à Bernard Liou* (Montagnac, Monique Mergoïl, 2002), 319–24.

¹ Wierschowski (2001).

² The references I give here are to the Spanish edition (Remesal Rodríguez 1986). José Remesal has recently reiterated his arguments: Remesal Rodríguez (1999).

³ I quote this sentence from the abstract of the article, which appeared in English (Wierschowski 2001: 61).

⁴ This would mean that the names on the necks of amphorae in Monte Testaccio were those of transporters and not, as is generally assumed, those of real traders (Remesal Rodríguez 1986: 111). It is true that José Remesal later refined his position (see, on all of this, Bernard Liou, in Liou and Tchernia 1994: 134–7).

Lothar Wierschowski carefully dismantles José Remesal's arguments and assumptions. The basic premisses he sees as debatable (for instance, there is no evidence that Baetica paid its tribute in kind). Some deductions he sees as wrong-headed: why should a special link between a particular area of Baetica, represented by a few large producers working from there, and a particular fort on the *limes*, even supposing that such a link could be proven, be necessarily taken as evidence that the trade was managed or that the state had a hand in it?⁵ Some hypotheses turn into facts later in the book. There were internal contradictions (for example, supply of the army had fallen, Remesal says, within the bailiwick of the prefect of the *annona* since the time of Augustus, yet 'the system of managed exchanges' he sees as having been established under Vespasian and can possibly be related to the granting of Latin rights to the provinces of Hispania). For all these reasons, Wierschowski rejects José Remesal's central ideas. He is particularly concerned to demonstrate that, under Augustus, the prefecture of the *annona* was not responsible for delivering oil to Rome or regulating the flow of it.⁶ The small number of new *castella* created by Vespasian cannot be taken as a reason for the reforms posited by Remesal; and, besides, Latin rights would not have been granted for the purpose of facilitating the gathering of taxes. All in all, Wierschowski says, 'detailed examination shows that the model put together by José Remesal Rodríguez, despite several very interesting points of departure, contains so many internal contradictions that it must be said it does not withstand criticism'.⁷

The article by Wierschowski stands in stark contrast to Rainer Wiegels's enthusiastic review of Remesal's book, published in the same journal in 1987.⁸ It is true, as Wierschowski points out, that Remesal's ideas have quite often been well received; and he adds (in his note 8) that he, too, got carried away when he was writing the article 'Heeresversorgung' for the *Neue Pauly*.

As far as I know, of the other reviewers, only David Mattingly tried, albeit politely, to voice some reservations.⁹ We owe a debt of gratitude to Lothar Wierschowski for having tackled head-on a bothersome problem and for having clarified it in a way that should carry conviction.

Moreover, Remesal himself had warned about other shortcomings in his own work, particularly some that are inseparable from the business of counting stamped amphorae. It has long been known that not all amphorae were stamped, that the proportion of the stamped relative to the unstamped can vary enormously from one period to another (until the time of Claudius, amphorae from Baetica were hardly ever stamped), and that, therefore,

⁵ Wierschowski (2001: 74–5, 109).

⁶ Wierschowski (2001: 47–54).

⁷ Wierschowski (2001: 58).

⁸ Wiegel (1987).

⁹ 'Whilst his conclusions remain speculative in some key areas, there is no doubt that this discussion represents a useful marshalling of the available evidence' (Mattingly 1987).

quantitative studies of the stamps, if particular caution is not exercised, are worthless. Remesal was quite aware of this and said so; yet he limited his study to the stamps. This was why he warned from the outset that his work was something of a 'pilot study', needing to be complemented by an overall analysis of amphorae, which might be done later by other scholars.¹⁰ Readers did not generally heed this warning, though it was repeated on p. 38 of the Spanish edition.¹¹ Remesal was also aware that the statistical bases of his count of amphorae, given the number of groups into which he divided them, were clearly inadequate. In the graphs designed to prove the link between a particular site on the *limes* and one of the producing regions of Baetica, the great majority of the groups contain fewer than six items, and many of them range from zero to two. Remesal acknowledged the problem: 'The volume of the data available is so slight that, if a single stamp from another workshop hitherto unrepresented on the *limes* should turn up, it would alter the curves.'¹² Hence his warning that his data did not lend themselves to statistical methods and that the only way his curves could be confirmed or invalidated would be by later studies. Despite which, he went on using verbs such as 'observe' or 'state'. When César Carreras Monfort and Pedro Funari recently undertook similar research in Britannia, they applied statistical methods both to their own data and to Remesal's. The conclusion was unavoidable: 'Statistical analysis of stamps found at sites in Germania does not support any geographical association.'¹³ So even the foundations of Remesal's structure of argument are very wobbly.

Let us now look again at the heart of the matter. There is no evidence that, under Augustus and in the first century AD, the military authorities treated supply of oil (or wine) to the troops in the same way as supply of grain, which was regulation procedure involving the docking of a lump sum from the men's pay. Wierschowski puts the oil trade squarely back into the private sector, where its customers were not just the military but also civilians, of whom there was an ever-growing population around the camps.¹⁴ He draws on the model devised by Keith Hopkins:¹⁵ producers in Baetica needed to increase their sales so as to pay taxes collected in the form of coin; and the troops on the *limes* were an excellent market for their olive oil.

¹⁰ Remesal Rodríguez (1986: 20, 25). The idea, argued on pp. 20–1, that the stamps had some 'fiscal or annony character' did not recommend itself to anyone, and Remesal seems to have abandoned it; see Liou, in Liou and Tchernia (1994: 138).

¹¹ One such reader was Wierschowski himself (see his note 58, where he inappropriately chides Remesal on that very matter).

¹² Remesal Rodríguez (1986: 25).

¹³ Carreras Monfort and Funari (1998: 53).

¹⁴ Carreras Monfort and Funari (1998: 58–9 and n. 60).

¹⁵ For the most recent version of which, 'Rome, Taxes, Rents and Trade', (2002: 190–232).

There is, however, one problem that cannot be sidestepped, one that is now central to the thinking of economists: information. How did information flow between troops on the *limes* in Germania and owners of olive groves in Baetica? And how did it have the effect of initiating a flow of trade? If we were to take a resolutely modernist view of the behaviour of economic agents in the early years of the Empire, we should imagine, for instance, that producers and traders in Baetica learned from the pedlars' grapevine that Drusus was preparing for a great campaign against the Germani and setting up camps near the Rhine. So they come together and say: 'That's a country where olives don't grow, where there are plenty of soldiers with a bit of money, who'll all be missing their Mediterranean products. It's a market not to be missed. Let's plant more olive groves, build more ships, divide them between the Atlantic route' (assuming it was as important as Remesal thinks, which I doubt) 'and the Mediterranean route leading to the mouth of the Rhône. Let's establish where offloading will be necessary so as to navigate up the Rhône and then the Saône. Let's work out how we get from there to the Moselle or the Meuse, unless it would be better to sail up the Doubs to reach the Rhine at Augst, and set up warehouses at the key places and appoint agents to them.' No one has ever dared to draft such a scenario. Yet that is what lies behind quite a few of the abstractions suggested.

Wierschowski is right to point out that traders were already present in the vicinity of the armies at the Republican period and that they had acquired experience in the course of these campaigns. They can be seen to be active in 109 BC in the war against Jugurtha, bartering 'foreign wine and other luxuries' for slaves or livestock;¹⁶ and in the *Bellum Africum* (75, 3), they follow Caesar's army with their wagons laden with merchandise.¹⁷ There were traders on the Rhine before Augustus' stay in Lyons and the organizing of the forts in preparation for the campaigns in Germania.¹⁸ And the supplying of army grain had, long since and often, been contracted out to tax-farmers or entrusted to civilians.¹⁹

Nevertheless, none of these examples (the first of which must have been closely linked to the slave trade) appears to correspond exactly to the situation of traders in Baetican oil (and fish products) engaged in regular long-distance

¹⁶ Sallust, *Jug.* XLIV. 5.

¹⁷ On traders and Caesar's armies during the Gallic Wars, see some admirable pages in Goudineau (1990: 256–8).

¹⁸ Cassius Dio, LIII. 26, 4: in 25 BC, M. Vinucius was to avenge Romans massacred after having entered barbarian territory with the intention of establishing commercial relations; LIV. 20, 4: Romans who had entered the territory of the Sugambri, the Usipetes, and the Tencteri were crucified, which led to Lollius' failed expedition against them in 16 BC.

¹⁹ Livy, XXIII. 48, 12; XXXIV. 9, 13. In 52 BC, Caesar entrusted the management of his troops' grain supply to Fufius Cita, a member of the equestrian order and a *negotiator*.

transport to the Germanic *limes*. So there are a few questions that really need to be asked.

There were other oil amphorae in central Gaul before any from Baetica; they came from Brundisium. One, from about 40 BC, was found at 'Horizon 1' of the Sanctuary of Cybele site in Lyons²⁰ and several more at Saint-Romain-en-Gal near Vienne.²¹ Others have been found at Mont-Beuvray and Geneva.²² [*And the very first oil imported to the limes is represented by four Brundisium amphorae in Mainz.*²³] As happened everywhere else, these amphorae disappear during the third quarter of the first century BC, to be replaced by the older Dr. 20s (Oberaden 83) whose shape was modelled on theirs. Neither José Remesal's ideas nor the Hopkins model could in any way be seen as consistent with these deliveries of oil from Apulia or Calabria, which opened the way for those from Baetica.

Munatius Plancus, the founder of Lyons in 43 BC, and even more so Agrippa and Augustus, during the time they spent there, clearly had the power to derive from wherever they liked the products that they or their entourages might need. This was generally the case with all governors of provinces or legates in command of legions; the *Digest* refers to these practices with the words *de rebus quas in usus advehendas sibi mandant praesides* ('property that the governors were accustomed to have transported for their use').²⁴ It appears to me almost certain that oil from the Brundisium amphorae was being drunk in Lyons, Mont-Beuvray, Geneva, and Mainz by highly placed personages stationed there with the army or the Roman administration, or by a few rich *coloni*. In this situation, traders would have been alerted by these people of power and would have become aware of the markets and the routes leading to them. Information could start to circulate.

Well before the creation of the first forts on the *limes*, a political decision had established Lyons as an *emporium*.²⁵ It was the base camp for the army service corps and for military and civilian supplies for the forts and settlements on the Rhine, and was thus the place where people could pick up information about opportunities offered by the Rhineland market. Goods ordered by the army were concentrated there, not only grain (much of which might have derived from areas closer to the forts) but also all the material useful for military equipment; then, from 15 BC, also the gold and

²⁰ Lemaître, Desbat, and Maza (1998). There is one amphora from Brundisium and no Ob. 83 amphorae in 'Horizon 1' before 40 BC (out of 47 items); in 'Horizon 2', somewhere between about 40 and about 20 BC, 21 Ob. 83 fragments (6% of the amphorae) and none from Brundisium (out of 367 items).

²¹ Dangréaux and Desbat (1992: 152).

²² Hesnard (1999: 168); in Geneva, stamped *VEHILL*: Callender (1965: no. 1773). [*See in addition the map in Loughton (2003: 200, fig. 16).*]

²³ Ehmg (2003: 26, 45).

²⁴ XXXIX. 4, 4, 1. ²⁵ Strabo, IV. 3, 2; see Goudineau (1989), [*and pp. 106–107*].

silver for the Empire's coinage, since the mint had been established there too. As a warehousing centre and a meeting place, Lyons was pivotal for information. This was the first and far from the least of the services rendered to traders by the imperial administration.

Other services were the facilities built on navigable rivers, the laying-down and maintenance of communication roads, all of them undertaken for military purposes. It was not traders who dug the *fossa Augusta* to make 'a navigable by-pass along a difficult sector of the Rhône',²⁶ which appears on the Orange cadastre. Traders presumably also used the Canal of Drusus nearer the mouth of the Rhine.²⁷ All this is obvious; and one could no doubt cite plenty of other examples. However, it may be possible to draw on other evidence that is less conspicuous. Quite a long time ago, O. Schlippschuh was intrigued by the absence of inscriptions mentioning the boatmen of the Rhine, though such inscriptions exist, from the second and third centuries, for most of the other rivers, including the Rhône, the Ouvèze, the Saône, and the Moselle. He posited a relationship between the lack of development of arrangements for river transport and 'the existence of the *Classis Germanica*, which had operated on the Rhine since the late first century'; but he thought it unlikely that military vessels would have taken on loads for civilian transport and concluded that traders must have had their own boats.²⁸ But does that mean we must rule out the possibility that elements of the army participated in the conveyance of goods that had no military status? C. R. Whittaker, on the strength of an inscription from Pisidia, came to the opposite conclusion.²⁹ I myself once tried to argue that the casks of 1,000 litres and more found at Oberaden required the use of hoisting equipment that traders, especially in the front-line camp on the Lippe, would not have had at their disposal and that

²⁶ Salviat (1986a: 110); see also Chouquer and Favory (2001: 227–8) [and Leveau (1999: 102): 'allowing boats to skirt a stretch where the course of the Rhône was all but blocked by islands that made navigation difficult.']

²⁷ Tacitus, *Ann.* II. 8, 1 and Suetonius, *Cl.* I. 2.

²⁸ Schlippschuh (1974: 93).

²⁹ Whittaker (1994: 111–12 (1989: 63–4)). For the text of the inscription, see Mitchell (1976). [I would no longer interpret in the same way the passage in the inscription that forbids those qui frumentum aut aliud quid tale vel quaestus sui causa vel usus portant from taking advantage of the privileges reserved for officials posted elsewhere on duty by requisitioning means of transport provided by the city of Sagalassos. The editor canvasses two possibilities: either the transporters were traders or they were landowners 'moving the products of their own estates to the cities, which must have happened regularly' (Mitchell 1976: 127). The second of the two hypotheses strikes me as the more likely: for one thing, the idea of usus (consumption in town of the produce of one's own agricultural estate) is juxtaposed with the idea of quaestus (meaning that these would have been local sales); and, for another, large landowners trying to flout the privilege had more ways of pressuring people than transient traders. However, Whittaker's conclusion, that 'the same men who contracted for official supplies used state transport for their private profit if they could get away with it', is still valid. See Ch. 4, 'On the Usefulness of the Misuse of Public Property'.]

must have belonged to the army.³⁰ I think it is likely that the boats that were going up and down the Rhine and its tributaries, carrying the goods deemed essential for the troops and for warfare, also carried, at times or even often, other goods belonging to civilian traders, at least in the form of makeweights. To maintain, as Whittaker does, that this was a mode of subsidized trade is to use terminology that is out of keeping with the reality of Roman administration, although the idea is still economically pertinent. The distinction we make between the civilian and the military realms was foreign to ways of thinking in Antiquity. What was going on was a sharing of facilities for purposes that, if not official, still helped boost the morale of the troops, a matter obviously of no small concern to the legates. In this more conscious way, too, the army's support was a great fillip to private trade.

Lyons and Vienne were definitely offloading and reloading points for the river traffic. What is harder to determine is whether these towns marked similar transitional links in the chain of trade—in other words, whether the same traders conveyed and temporarily owned the goods upstream from Lyons to the Rhine as well as downstream from Lyons. Stefanie Martin-Kilcher's study of inscriptions on amphorae found north of Lyons has led her to the conclusion that this was not generally so.³¹ If this was already the case by the time of Drusus, one wonders who the traders were on the final stretch. Presumably, they were those who followed the army on campaign. However, they may also have been soldiers: Wierschowski's view is that the *miles negotiator cervesarius* of the *Classis Germanica* and the *centurio negotiator* of the XVth legion were military men who also engaged in commercial activities on the side.³² I wonder whether it would not be equally plausible that one of their military duties was to make sure their *commilitones* received goods that were not part of standard daily fare.

One final matter to be examined is the prior link in the chain, the circulation of information and the conveyance of goods in the Mediterranean. It is highly improbable that the few amphorae originating from Brundisium found in the valley of the Rhône or farther north had come directly from there. It is much more likely that they had been sent on from warehouses in Rome, Ostia, or more probably Puteoli. What were the circumstances surrounding delivery of Baetican oil? Strabo (no doubt copying Posidonius) says, 'all the foreign trade of the country [Turdetania] is carried on with Italy and Rome' (trans. H. L. Jones).³³ It is true that, in the present state of archaeological findings, the oldest known oil amphorae from Baetica would appear to derive, as I have

³⁰ Tchernia (1997: 127). I make no reference here to the casks on Trajan's Column, as it is possible or even probable that by that time wine had already started figuring in the troops' daily fare.

³¹ Martin-Kilcher (1994: 422; [(2002); *Martin-Kilcher and Witteyer* (1998–9)]). However, evidence is lacking for the particular category of the Dr. 20 amphorae.

³² Wierschowski (1982: 38–9).

³³ III. 2, 5.

said, from Lyons and Saint-Romain-en-Gal, dating from a little before 20 BC. The next ones come from Oberaden (between 12 and 7 BC) and perhaps from Neuss.³⁴ The La Longarina deposit in Ostia, which was closed around the start of the common era, contains both of the older types of Baetican amphorae: the first type has a closer resemblance to the Haltern amphora; the second looks more like the Oberaden type and must date from roughly the period of the camp.³⁵ The only wreck of Oberaden 83 amphorae, or rather containing some Oberaden 83 amphorae, lies a great distance away, in the Aeolian Islands;³⁶ it was definitely not making for the mouth of the Rhône. Here, we are faced with two problems: one is the difficulty of accurate dating in an area where archaeology can obviously not be expected to provide us with precise years; and the other derives from the sparseness of archaeological evidence on arrivals of amphorae in Rome before the beginning of the Empire.

Clearly, the economic ties that grew up between Baetica and Rome are easier to imagine than those between Baetica and the army on the Rhine. David Mattingly has already suggested an interesting hypothesis about the origins of the trade in Baetican amphorae with Rome: that the first amphorae were complementary to cargoes of metal ingots which were already being exported from the Spanish mines.³⁷ Additionally, I suggest, there was the more circumstantial role that may have been played by Balbus *maior* and Balbus *minor*, whom Ronald Syme calls 'the dynasts of Cadiz'. From the time of Pompey to the reign of Augustus, both these men of Gades held posts of the first rank at Rome, cleverly managing to survive the civil wars unscathed. L. Cornelius Balbus *maior* was granted Roman citizenship in 72 BC after participating in the war against Sertorius. In 40 BC, having become immensely wealthy thanks to his adoption by Theophanes of Mytilene, he was the first provincial ever to be made a consul. In 19 BC, his nephew Balbus *minor* was to be the last senator ever granted the honour of a triumph. His relevance to this discussion is that he founded the *Neapolis* of Gades and had the harbour facilities developed, probably round about the time of his quattuorvirate in 44–43 BC.³⁸ Gades had long been one of the great *emporia* of the Mediterranean, maintaining frequent contacts with Rome.³⁹ The large-scale euergetism of Balbus *minor* was undertaken on behalf of a population of sailors and fishermen. It coincided with a new stage in the commerce that he had many other ways of fostering in Rome, particularly by patronizing traders from

³⁴ Vegas and Bruckner (1975). ³⁵ Hesnard (1980: 148 and pl. VI, 1–2).

³⁶ Capo Graziano C wreck: Cavalier (1985); Liou (2002: 1064).

³⁷ Mattingly (1988: 52–3).

³⁸ Strabo, III. 5, 3. This passage has been seen in parallel with Cicero's letter to Atticus, XII. 2: *At Balbus aedificat*.

³⁹ On Gades and its commercial tradition at the time of the Balbi, see Des Boscs-Plateaux (1994).

Hispania. In addition, the variety of products transported⁴⁰ meant that very large vessels⁴¹ could be filled with cargoes and freight charges reduced accordingly.

Bernard Liou, as it happens, dates the two oldest wrecks carrying homogeneous cargoes from Baetica (fish sauces or salted-fish products) to the years immediately after the middle of the first century BC: Le Titan at the Île du Levant and the Grand Congloué 3 in the harbour at Marseilles.⁴² The second of these contains amphorae that are identical to the ones stamped SCG and OP.M.LVCR, known from their discovery at the place where they were produced near Algeciras, at *Belo* and in the workshop of El Rinconcillo. Here, too, we are dealing with amphorae dated to the middle of the first century BC or not long after.⁴³ The marks on them have also been found in Rome, at *Nomentum*, and in Sardinia.⁴⁴ However, where the Le Titan and the Grand Congloué 3 were bound for is not certain, though we can probably say that the course of the former, which had passed the mouth of the Rhône and Marseilles, was along the coast to Italy.⁴⁵

To be able to state anything more accurate, we can only hope that, one day, discovery of a site from the middle of the first century BC in Rome or Ostia will afford us better evidence. In my own view, given the present state of knowledge, the following scenario seems plausible. Ever since the Punic era, the Cadiz region had been producing salt fish and fish sauces.⁴⁶ By the middle years of the first century BC, Gades had become a large port with connections to Rome, and the rapid growth of population in the capital brought with it increasing and constantly renewed needs in the matter of nourishment. Both Balbi (especially Balbus *minor*), being also and inevitably large landowners in Baetica, facilitated a new stage in commercial relations with Italy. Ships laden with goods from Baetica's salting factories, larger and more numerous, sailed along the coasts of Gaul, put in there, and eventually arrived in Italy. About twenty years later, long enough for more olive trees to have grown, oil amphorae were added to the cargoes. In the Rhône valley, after the founding of Lyons, a few important Romans, now living there more or less permanently, had oil brought in from Apulia for their own use. A little before 20 BC, oil from Baetica made its appearance, and it soon replaced the Apulian variety. When

⁴⁰ This is the conclusion drawn by Liou (1981).

⁴¹ See in particular the Sud-Perduto 2 wreck in the Strait of Bonifacio, with its three or possibly four layers of amphorae: Pomey *et al.* (1992: 59–60).

⁴² Liou (2002: 1071–2, 1091, pl. J-K). It would be worthwhile to carry out further and more thorough research on the evidence from the wreck at Cap Negret in Ibiza (Parker 1992), where Maña C2 and Dr. 1C amphorae are found side by side.

⁴³ First published by Cl. Domergue (1969: 447–9); see the note by Hesnard (1998) and Étienne and Mayet (2002: 113–22).

⁴⁴ *CIL* XV. 3417, 3498; Pola (1976: 53, site I, 52, 11); *RTAR* II. 566.

⁴⁵ On the two itineraries from Baetica to Italy, see Liou (2002: 1062).

⁴⁶ Étienne and Mayet (2002: 9, 103, 108–13).

the stable military groupings were established on the *limes* from 16 BC onwards (the population of the fort at Oberaden being as large as Pompeii's), traders from Baetica, taking advantage of the facilities and the means of the army, and benefiting from the pivotal transport role allotted to Lyons by the needs of the military, started to set up a regular and well-organized supply circuit leading from Gades to Lyons, then up the Rhine.

I trust this may suggest a few lines of enquiry in the search for a slightly more complex model for the delivery of Baetican oil to the Germanic *limes* at the time of Augustus.

Warehousing and Complementary Cargoes on the Alexandria Grain Run

In this text, I present three cases in which merely drawing an arrow between two points seems to me to give a very inadequate account of the conditions in which trade is carried on. The first and third of them concern accompanying goods or ‘interlocked trade’; in the second, I deal with redistribution. Two of them are based on the Murecine tablets and the other on a sentence in Fronto.

THE MURECINE TABLETS

The Murecine tablets, now also known as the Archive of the Sulpicii, were unearthed in 1959 in excavations carried out during the construction of the Naples–Salerno motorway. Not far from Pompeii, about 600 metres south of the Stabiae Gate, a building containing five *triclinia* decorated with fine paintings in the Fourth Style and opening onto a peristyle was partially uncovered. It had been built before the earthquake of AD 62 and was in the process of being repaired in 79; it was being used as a storehouse. In the central *triclinium*, on one of the couches, there was a wicker basket containing some 300 writing tablets, detailing about 150 financial or judicial operations (the latter, for the most part, were *vadimonia*, summonses to appear in court), all of which centred on Puteoli. They were part of the archives of the Sulpicii family, bankers or financiers who figure in most of the transactions. The building must have belonged to them. In 1999, after many years of partial and often unfortunate publication by other scholars, Giuseppe Camodeca brought out an excellent critical edition, the product of an enormous amount of work.

This is a reworked version of an article published in J. Pérez Ballester and G. Pascual (eds), *Comercio, redistribución y fondeaderos: La navegación a vela en el Mediterráneo: Actas de las V Jornadas internacionales de arqueología subacuática, Gandía, 8–10 de noviembre 2006* (Valencia: Universidad de Valencia, 2008), 57–64.

All reference to the tablets, under the abbreviation *TPSulp*, derives from his numbering of them. As one might expect, however, the interpretation of particular tablets or groups of tablets, some of which had been abundantly discussed even before publication of Camodeca's edition, still gives rise to debate.

THE GRAIN FROM ALEXANDRIA AND THE LENTILS OF C. NOVIUS EUNUS, A TRADER AT PUTEOLI

The story of C. Novius Eunus develops over five tablets from 18 June 37 to 15 September 39. In June and July 37, he borrowed altogether 13,000 *sestertii* against 7,000 *modii* of grain from Alexandria and 4,000 of emmer (*far*), chickpeas, lentils, and *monocopus* (the meaning of the word is unknown, though it was very likely some other legume). These foodstuffs had been warehoused under his responsibility in the *horrea publica Bassiana* at Puteoli; the moneylender immediately had them moved within the same *horrea* and took responsibility for them (*TPSulp.*, 50, 51, 45). Later tablets show that Eunus had great trouble in paying back the entirety of the borrowed capital and the interest due on it (*TPSulp.* 67, 68).

Here, I would like to focus a little on the activities and personality of this C. Novius Eunus. He was a freedman from Puteoli, his master being the manager of the granaries where his produce was stored. According, first, to Jean Andreau, then to Giuseppe Camodeca, he was a speculator who would buy up victuals both from newly docked ships from Alexandria and in the local Campania area, so as to put them into store in the hope of a price rise, when he would either sell them locally (Camodeca's position) or have them sent to Rome (Andreau's position).¹ It is true that, with the first deliveries of Alexandrian grain in June, this was a season when prices would fall; but, if Eunus could wait till winter to sell, he would get a better price. So, to tide himself over this period, he took out a loan. In the situation posited by Camodeca, Eunus would make no contribution to the delivery of the goods; he would be the link in the chain seen as useless, if not harmful, by the ancient world, the basis of its negative view of small-scale trading.

This interpretation, while clearly not absurd, is not actually necessary. It rests in fact on two assumptions: that, if there was a waiting period and warehousing, there must have been speculation; and that the produce pledged as surety by Eunus was, apart from the grain from Alexandria, locally grown. Both assumptions can be doubted.

¹ Andreau (1994: 47–8); Camodeca (1994: 105; 1999: 140).

It is known that, at that time, before the harbour works undertaken by Claudius and Trajan at Ostia, the large ships carrying supplies to the capital docked at Puteoli, where their cargoes were unloaded onto smaller ships to be conveyed to Ostia and Rome. An operation of that kind could not be done as straightforwardly as one might naively imagine, just by shifting a load from one quayside to another. Unloading and reloading took a long time, at least about a week, and required a large workforce. Generally, there was no synchronization between the two operations. Berths had to be competed for and waited for. Ships for the last leg of the journey were not always available in sufficient numbers to meet the long-distance vessels, especially when the great ships were arriving at a faster rate. Documentation from customs could be delayed. In short, any such offloading operation was lengthy and complicated; and it could involve a longish period of storage of goods. An article by Catherine Virlouvet, which supports my way of thinking, quite correctly states: 'Puteoli was an offloading port, where part of the goods for the capital were unloaded and stored until a smaller vessel, capable of docking at Ostia, could take them on to Rome.'²

The second assumption, which has a bearing on the first, has to do with the fact that Novius Eunus' goods originated from two different sources, Alexandria and the local region. It must be the presence of emmer (*far*) among the produce he pledged that has led people to the belief that it and the rest of the different legumes listed after the grain from Alexandria had been grown in Campania. Emmer is a husked grain, which was widely cultivated in the Mediterranean area during the archaic period (cf. Pliny, XVIII. 62), and was still being widely grown in Campania, where its quality was second to none: *Quod far conferam campano?* was one of Varro's rhetorical questions in his eulogy to Italy at the beginning of *Res Rusticae* (I. 2, 6). Strabo (V. 4, 6) and Pliny (XVIII. 82) confirm this. Also highly regarded was *far* from Chiusi (Columella, II. 6, 3). It grew abundantly in Gallia Transpadana, as is attested not only by archaeological finds³ but also by a passage in Pliny (XVIII. 66).

Few scholars have followed the arguments of M. S. Spurr, who maintained that the lentils and chickpeas could only have come from Egypt.⁴ As is well known, Egypt is a country for lentils and Alexandria is a lentil city. In the *Deipnosophistai* of Athenaeus (IV. 158 d), the grammarian Plutarch comes from Alexandria; and, when the conversation turns to lentils, he is addressed as follows by another guest: 'But you people from lovely Alexandria . . . grew up on food made of lentils, and your whole city is full of dishes based on lentils' (trans. E. Minchin). Lentils from Pelusium seem to have been renowned for their quality; in the *Georgics*, Vergil says they have been adapted to the climate

² Virlouvet (2000a: 144). My position had already been noted and accepted by Andreau (1997: p. xii).

³ Castelletti, Castiglioni, and Rottoli (2001: 50).

⁴ Spurr (1986: 116).

of Italy (I. 228). The ones grown in Palestine also originated from Egypt.⁵ The presence of Pelusium lentils in Rome is attested in Martial (XIII. 9). Pliny mentions two varieties of lentils growing in Egypt, which is, in fact, the only place of cultivation of them that he does mention (XVIII. 123). There were undoubtedly others, in Italy and elsewhere, though they were presumably less important. Significantly, and right at the time mentioned on the tablets, the possibility of large-scale imports of Egyptian lentils to Italy is demonstrated by the giant ship that, at Caligula's behest, conveyed from Alexandria to Rome the obelisk now standing in St Peter's Square. During the voyage, the obelisk was ballasted by 130,000 *modii* of lentils (Pliny, XVI. 201). Further evidence for the lentil trade seems to me to be provided by an old archaeological discovery. It was reported in 1889 by Lanciani, who was in charge of excavating four rooms of the *horrea Galbana*:

Not long ago I watched the excavation of one wing of the *horrea [galbana]* which some workmen were uncovering: of the four storerooms searched under my direction, the first contained huge tusks of ivory, forming a total volume of 675 cubic feet; the second contained a few bushels of lentils; the third a bed of crystalline sand used by stone-cutters; the fourth was filled up with *amphorae* of various sizes.⁶

The tusks obviously came from India or from the African coast south of Egypt; and they had passed through Alexandria. The same can almost certainly be said of the sand, if we rely on Pliny, who says it was imported from Ethiopia or India.⁷ In between them were the lentils, which must have been unloaded from the same ship and deposited in an adjacent storeroom.

So, if it is possible that the *far* came from Egypt (there is no such uncertainty with the chickpeas), the list of goods pledged by Eunus is internally consistent, and there is a strong probability that they all came in as a single cargo. It may be objected that Jasny, after Schnebel, states that production of emmer wheat (ζεία or ὄλυρα in Greek) had almost entirely ceased in Egypt by the start of the common era, though it was still widely grown in Italy.⁸ This objection, however, is not valid: Jasny himself says a few pages later that the fact alleged can be doubted. Although papyri mentioning emmer in Egypt are more numerous at the Hellenistic period, there are others dating from the Roman period.⁹ And, most importantly, Pliny speaks of *zea* and *olyra* (which he mistakenly differentiates from Italian *far*) as being characteristic of Eastern

⁵ Heicheleim (1938: 130).

⁶ Lanciani (1889: 250).

⁷ Pliny, XXXVI. 51: *nam id quoque accessit ut ab Aethiopia usque peteretur quod secaret marmora, immo vero etiam in Indos quo margaritas quoque peti severis moribus indignum erat* ('for...material for cutting marble is sought from as far afield as Ethiopia; and, moreover, men go in search of it even to India, where it was once an affront to strict morality to visit even for pearls') (trans. D. E. Eichholz).

⁸ Jasny (1944: 117); Schnebel (1925).

⁹ Lewis (1994: 139, n. 7).

provinces, including Egypt (XVIII. 81; cf. 62); a few pages later, he says that *olyra* grows well there and gives good crops (XVIII. 92: *in Aegypto facilis fertilisque*).¹⁰

It is, therefore, quite plausible that the Alexandria grain, the *far*, and the legumes arrived together from Egypt. They were one consignment in a cargo on a single ship from Alexandria. The tablet has long since been seen as evidence for the existence of private trading in Egyptian grain bound for Italy. It also proves there were imports of legumes of lesser value, obviously carried as complementary cargo, filling up space in a hold that, for one reason or another, could not be wholly occupied by grain.

What would still have to be established is whether it was Eunus himself who had organized the transport from Egypt and was pledging the residue of a cargo; whether he had bought part of a cargo from a ship freighted by someone else; and what he was planning to do next with his grain and legumes. To such hypotheses we can provide no answers. What can be said for certain, though, is that the 11,000 *modii* pledged as surety is consistent with the tonnage of ships plying between Puteoli and Ostia.

MENELAUS, A CARIAN SHIP'S MASTER, AND BAETICAN AMPHORAE IN THE EASTERN MEDITERRANEAN

On one of the tablets (TPSulp. 78¹¹), dated 11 April 38 and written in Greek except for the part about the debtor's guarantor, Menelaus, a son of Irenaeus, from Ceramos in Caria, acknowledges having received from a slave of P. Attius Severus a loan of 1,000 *denarii*, to be repaid in accordance with the terms of a sealed *naulotikè* agreed with the lender.

This text was once interpreted as a receipt for a standard maritime loan. Then it was noticed that the term *naulotikè* is never used in papyri to mean a loan, but only ever a transport contract. It does not correspond clearly to any well-attested legal document. To account for it, two different hypotheses have been advanced. The first of them, drawing upon similar evidence from the Middle Ages, sees it as a mode of maritime insurance based upon a fictitious loan.¹² There are, in fact, several documents attesting to this practice at Genoa and Barcelona in the fourteenth century. The insurer acknowledges having received a sum to be reimbursed to the insured (the trader who owns the

¹⁰ My thanks to Hélène Cuvigny for her assistance with *zeia* and *olyra* in the papyri.

¹¹ For Camodeca's later comment on this tablet, see Camodeca (2000: 188–90; 2003: 88–90).

¹² Gofas (1994); Thür (1994).

cargo) unless the goods ensured come safely to port.¹³ In other words, in case of shipwreck, he will pay the insured a sum equal to the value of the cargo as estimated in the sham loan. For it really was a matter of fictitious loans, a form devised as a legal guarantee that the insurer would pay up if the cargo was lost. In the case of Menelaus, the insurer is the ship's master who has undertaken to transport the merchandise of P. Attius Severus. The insurance premium would be included in a higher freight charge (*naulum*). This interpretation does offer a satisfactory explanation of the text; but the lack of a comparable example from Antiquity rather weakens it.

Another explanation, argued by Eva Jakab,¹⁴ is based both on papyri in which the *naulum* or *vectura* is paid at the outset in part or in its entirety, and on a passage from the *Digest*, focusing on a case in which, after the loss of the transporter's ship, the owner of the cargo requires reimbursement of the freight charge that the transporter had received as a loan.¹⁵ The *vectura* paid in advance would become a reimbursed loan only if the transporter does not bring the goods safely to port. Unfortunately, the *Digest* is textually unsound here: several suggestions of emendation of it have been made, and it is debatable on legal grounds.¹⁶

In either scenario, P. Attius Severus' slave signs a contract on a cargo to be embarked by Menelaus. As it happens, P. Attius Severus is a character of note in another context: his name figures on the necks of Baetican amphorae found in Rome, some of which had contained fish products and others olive oil (*CIL* XV. 2, 3642–5, 4748–9). Because of the mention of him on the Sulpicii tablets, Camodeca includes him on a list of traders in produce from Baetica whom he deems to be from Puteoli or at least from Campania. This idea has been taken further by Robert Étienne and Françoise Mayet and especially by Andrzej Łoś, though Łoś does express some caveats with regard to Étienne and Mayet and widens the scope of the problem to embrace a much larger sample of names.¹⁷ The argument is convincing when it stands upon accurate identifications¹⁸ or on onomastic distributions where there are very marked differences in the lapidary epigraphy. This, however, is not always so, especially in the case of very common names, which is why Łoś, on the one hand, and Étienne and

¹³ I am happy to thank Professor Ferrer, who, during the conference at which this chapter was read, very kindly improved my understanding on this matter and then sent me a copy of her book in which such practices are very clearly explained (García i Sanz and Ferrer i Mallol 1983: i. 128–9). The authors' examples offer medieval parallels that correspond even more closely to the example from Puteoli than those given by Gofas.

¹⁴ Jakab (2000); cf. Rathbone (2003: 208–10).

¹⁵ *Dig.* XIX. 2, 15, 6: *Item, cum quidam nave amissa vecturam, quam pro mutua acceperat, repeteretur...*

¹⁶ Cf. Camodeca (2003: 89).

¹⁷ Camodeca (1992: 212–13, n. 25; 1993: 39; 1999: 179); Étienne and Mayet (2002: 219); Łoś (2005).

¹⁸ This is the case with Étienne and Mayet (2002: 219).

Mayet or J. Lagostena Barrios,¹⁹ on the other, are not infrequently at loggerheads over a trader's geographical origin.

However, certain cases are beyond doubt. Take A. Titinius Herculanus: his name is found in Pompeii on an amphora used to carry the mysterious *laccatum* from *Tingi* (*CIL* IV. 9373, on Pompeii form VII²⁰); and he is definitely from Puteoli, as there are only four Titinii (belonging to two families) in Baetica and none in Narbonensis, whereas the name is attested seventeen times in *CIL* X and crucially in Puteoli itself, preceded by the unusual forename Aulus (*CIL* X. 3014–16). We can safely say that C. Hostius Agathemerus (*CIL* IV. 5605, 5610) is also from there, given that his name is totally absent from the provinces of Hispania and Narbonensis, while turning up fifteen times in the *indices* to *CIL* X, two of them with the form C. Hostius in Puteoli. The mention of him, however, in the Archive of the Sulpicii (*TPSulp.* 61), beside the fact that the reading is a doubtful one, has no further probative force: traders from Baetica were bound to have had agents in Puteoli; and some of them must even have lived there from time to time. From a later but very vivid text, we know that the Iberian traders (unlike Étienne and Mayet, I suspect that here 'Iberian' must be a term indicative of mere geographical location) owned a building in Puteoli where they had to slaughter a giant octopus that had entered via a sewer and was devouring the salt fish they had stored there.²¹ This does imply an ongoing presence, either of traders or of their agents; and it is perfectly understandable that they would have made business contacts in the port. So P. Attius Severus could just as easily have been from Baetica²² as from Narbonensis or Italy.²³

Where he comes from actually has little bearing on my argument. What is important is that the cargo loaded onto Menelaus' ship was probably (as Camodeca has already observed²⁴) made up of Baetican amphorae, which were warehoused at Puteoli and belonged to the trader P. Attius Severus.

All we know of this Menelaus is what the tablet says. We can deduce his role from that of P. Attius Severus: as the latter, a trader, is also the owner of the load, Menelaus must be the transporter. So he is a ship's master from Caria. Where was he to convey P. Attius Severus' amphorae? Camodeca's answer to this question was 'Rome or elsewhere'; Catherine Virlouvet says: 'Destination unknown (perhaps Rome?).'²⁵ It is quite possible that Menelaus' ship was

¹⁹ Étienne and Mayet (2004); Lagostena Barrios (2004).

²⁰ Cf. Botte (2009: 144).

²¹ Aelien, *De anim.* 13, 6.

²² However, it must be said that the case made along these lines by Lagostena Barrios (2004: 218) and Morales Muñoz (2005: 257–8, 267), for a C. Attius Severus from Prado de Rey (*AE* (1955), 21) is not convincing, given the extreme frequency of the *cognomen*.

²³ Étienne and Mayet (2004: 164) argue for Narbonensis; Camodeca (1993, 1999) for Italy.

²⁴ Camodeca (2000: 190).

²⁵ Camodeca (1999); Virlouvet (2000a: 134).

bound for Rome from Puteoli. But it is unlikely that, being from Caria, such a *peregrinus* would have been regularly and mainly engaged in transport along the coasts of Campania and Latium. He would seem more at home on the trade runs to and from the eastern Mediterranean. It should be noted, as Camodeca says, that April marks the recommencement of the sailing season. If Menelaus really was an old hand on the eastern run, then he had probably been wintering in Puteoli. He would have to return to his home port before coming back, perhaps with a load of Alexandrian grain from the next harvest. A trip out of Puteoli might well have to be done only in ballast, if there was no return load for him to carry. We now have, after all, evidence from the second century AD, in the form of papyrus Bingen 77, for such return trips in ballast.²⁶ Menelaus was thus ready to take any cheap load. This was the case with all return voyages when exchanges in trade were unequal. It is understandable that P. Attius Severus' slave should have taken advantage of this to dispatch Baetican produce to the far end of the Mediterranean.

This theory would be pretty groundless, were it not for the fact that we do know of Baetican oil amphorae turning up at Alexandria and elsewhere in the eastern Mediterranean. E. Lyding Will published eighty-four stamps from such amphorae; they date from all periods between the first and the third centuries AD; most were found at Alexandria, and very few at Athens, Corinth, Rhodes, and Antioch.²⁷ In 1988, David Mattingly argued that Baetican amphorae found in Alexandria would not have arrived there via direct transit; it was much more likely that they had been reloaded in Italy, then carried by ships of the grain fleet on their return trips.²⁸ A third leg of their journey took some of them to Athens, which the large ships did not usually visit; and, in this way, oil and salt-fish products from Baetica became luxury products there, as can be seen from Lucian's *The Ship: or, The Wishes*. When one of the Alexandrian ships, blown off course by a gale, does seek refuge there, to the admiration of everyone, and Adeimantos is asked what he would do if it was his, he describes his life as a millionaire: 'Dinners on gold... a pickled fish from Spain, wine from Italy, oil from Spain...' (trans. K. Kilburn).²⁹ The cargo owned by P. Attius Severus, a multifarious trader in Baetican oil and salted-fish products, as well as the ship's master from Caria are not at all out of place in such a scenario for redistribution of goods from Italy to the eastern Mediterranean.

One uncertainty remains, depending on the legal meaning of the tablet. The sum lent to Menelaus, 1,000 *denarii*, is quite small relative to other commercial loans, as Eva Jakab has said. In the case of the fictitious loan serving as

²⁶ Heilporn (2000); Arnaud (2005: 118–19).

²⁷ Will (1983). There are papyri that speak of the *ἐλαιον Σπανόν* (oil from Spain) in Egypt (Husson, 1970: ii. 57).

²⁸ Mattingly (1988: 53).

²⁹ Lucian, *Nav.* 23.

insurance, such a sum would not cover the value of the cargo of a ship of average size, even one laden with cheap products.³⁰ The cargo insured, if 1,000 *denarii* really represents its worth, was quite small: a few hundred amphorae at most, not enough fully to load a seagoing merchant vessel for a voyage on one of the important trade routes of the first century AD, and representing at best a residue that P. Attius Severus' slave would have disposed of, unsold stock shipped by chance to the other end of the Mediterranean. If, however, the 1,000 *denarii* represents the value of the *naulum* (freight charge), then what Menelaus' ship has taken on is a much larger cargo: and we would have an organized trade, in which P. Attius Severus, who is not just one of the small number of traders dealing in both oil and *garum*, can be seen to have been also a smart organizer of a reshipping trade out of Puteoli, complementary to the trade he was already engaged in between Baetica and Italy.

THE LOW PRICE OF CRETAN WINE IN ROME

In the second century AD, one of the pieces of advice that Fronto gave to one of his illustrious pupils in rhetoric (either Lucius Verus or Marcus Aurelius) was that striving to use elegant vocabulary is not nice, though neither should one eschew a refinement of language if it comes to one spontaneously:

It would be as if, when you were received by a host who offers you Falernian wine because he produces it on his own estate and it is abundant at home, you asked for wine from Crete or Saguntum, which he had to go elsewhere to buy—a curse upon it—and for which he had to pay.

(*Ad M. Antonium imp. de eloquentia*, I. 4, Van de Hout,
132–3 = Naber 115, trans. C. R. Haines, adapted)

This text makes it plain that, unlike Falernian wine, Cretan wines (some varieties, at any rate; though *passum*, a well-known raisin wine from Crete, cannot be included in that category) and wines from Saguntum were seen as cheap, available at any local *taberna*. This contradicts the principle that, until the Industrial Revolution, imported wines were expensive. The reason for this was, first and foremost, that such a principle could not apply to the huge population of Rome: local areas could not produce enough wine to keep the city supplied, so it was necessary to draw on coastal wine-growing regions overseas. For Cretan wine, archaeology supports Fronto: in Giorgio Rizzo's recently published quantification of amphorae in Rome, wine from Crete accounted for 20 per cent of the wine shipped in amphorae in the Antonine

³⁰ Jakab (2000).

period.³¹ In the first and second centuries, except under Trajan, it was present in greater quantities than wine from Gaul, despite having to be brought from much farther away in more difficult conditions. It was also plentiful in Puteoli and Pompeii, where the amphorae that contained it are outnumbered only by the Dr. 2–4s.³²

Publications by Fausto Zevi and Stefano De Caro establish an initial explanation.³³ Capua, as compensation for having a colony of veterans settled on its territory, had been granted by Octavian extensive lands in the territory of Knossos. They belonged to the city, and the rent they brought in, according to Velleius Paterculus (II. 81, 2), was 1,200,000 sesterces a year. The discovery, in Santa Maria Capua Vetere, of an amphora with the Greek inscription ἐπιτυγχάνοντος [*sic*] (τῶν) Καμπανῶν ('intended for the Campanians') enabled Stefano De Caro to demonstrate that part of this *vectigal* was paid in kind. Cretan wine imported in this way to Campania was sold in Capua by the municipality.

From here, we can go on to ask about ways of conveying these amphorae, as well as the much-better-attested ones that were brought in by traders whose names, inscribed on their sides, have been discovered at Pompeii. Once the Etesian winds started to blow, about the end of June, ships bound for Italy from Alexandria could no longer follow a direct course. They had to go on a long detour via Cyprus, or even along the coasts of the Levant and southern Anatolia, before sighting Rhodes and then, depending on circumstances, heading for either Cape Malea or Crete. The journey of St Paul (Acts 27:1–12, 28: 1–14) is an example of this last leg, with the stop in Crete that it entailed, in his case on the south coast, though presumably ships would often put in along the north coast as well.³⁴

Ships used by the *annona* were not owned by the state, but were freighted by the state. Obviously, there would have been times when they were not fully laden; and ship operators could, quite legally, take on extra cargo, either at the outset or at a port along the way. The *Digest*³⁵ refers to a situation that was slightly comparable or even more advantageous: Hadrian had to make the point to governors of provinces that, if they sent someone to procure something from a distant place and he brought back other goods on the same trip, he must pay the customs duties (*id munificum sit*).³⁶ This text, if my reading is accurate, says nothing about the cost of the transport itself. This cost presumably depended on the relations between the legate's envoy and the owner of the extra goods. On a ship serving the *annona*, the situation could vary depending on whether its capacity had been freighted as a whole (*aversione*:

³¹ Rizzo (2003: 203–20); see Fig. 19.3 [and now Casaramona et al. 2010 for the 139,896 sherds of Cretan amphorae discovered in the excavations of the Nuovo mercato di Testaccio].

³² Marangou-Lerat (1995: 159).

³³ Zevi (1989); De Caro (1998); cf. Pagano (2004).

³⁴ Arnaud (2005: 13–14, 212–13, 222).

³⁵ Dig. XXXIX. 4, 4, 1.

³⁶ See p. 103.

Dig. XIV. 2, 10, 2) or according to specified amounts loaded. If this freighting had to be paid, it would certainly have been at advantageous rates. As in the *Digest* text, anyone who had connections among the staff of the administration could benefit more than others from these conditions. Ship operators negotiated with the state, particularly over the grain route from Alexandria, and they had to be careful to maintain good relations with the authorities in the provinces where they put in. On this point, Andrzej Łoś has recently shown how many imperial freedmen and participants in the administration of Crete there were among the traders who exported wine grown there. His examination of their names on amphorae at Pompeii shows there were 82 citizens in a sample of 110 inscriptions. More than half of the legible *cognomina* either are Latin, or are Greek *cognomina* of freedmen that were used much more in Italy than in Greece, and especially more than on Crete. There are a fair number of Ti. Claudii, imperial freedmen. Some of these characters can be identified—for example, two freedmen of P. Licinius Secundus, of the equestrian order, a procurator of Crete under Nero. After his initials, *LRS*, one of the traders has even noted his function: *procurator XX libertatis*, a procurator who was responsible for collecting the *vicesima* manumission tax.³⁷

The series of traders' names written on amphorae of other types (essentially Baetican amphorae) do not lend themselves to this type of identification. No one exercising any responsibilities in the administration of the province, and no dependants of such men, have been discovered. The peculiarities of the prosopography of the inscriptions on Cretan amphorae support the idea that they were cargo on ships serving the *annona*. Any man who had easy access to available space on these ships took advantage of it to engage in trade, this activity being supplementary to his official functions. Under such circumstances, wine from Crete was able to be delivered to Italy without being encumbered with transport costs, which, in the generality of cases, would have prevented it from being sold quite cheaply in the *tabernae* of Rome.

CONCLUSION

If we bear in mind transport conditions, market laws do not of themselves explain the sale of Egyptian chickpeas in Puteoli, Baetican oil in Athens and Alexandria, or the fact that Cretan wines were among those most commonly drunk in Rome. Circulation of these goods was a side effect of the huge trade in grain from Alexandria and the shipping it generated between Italy and the eastern Mediterranean. Once the circuit created by Rome's requirements in

³⁷ Łoś (1997; 2005: 91–4).

grain and its public distribution existed, they were carried along by it. They were derivatives, by-products of what was the greatest and longest-lasting undertaking in the realm of civil transport in the pre-industrial era. We can classify them as marginal but far from negligible economic activities, brought into being by the need to organize supply for the immense and unnatural mega-city that was Rome.

Wine Exporting and the Exception of Gaul

With this chapter, I hope not just to help publicize the conclusions arrived at in recent years by scholars working on finds of Greco-Italic and Dressel 1 amphorae in Gaul, but also to set them in a broader context and examine what consequences they have for our thinking about Italian wine-growing in the final century of the Republic.

TRANSFORMATION OF DISTRIBUTION MAPS FOR THE EARLY SECOND CENTURY BC

For some time now, scholars have been substantially rewriting the chronology of wine exportation from central Italy, extending it ever farther backwards in time. First was Christian van der Mersch, who reconsidered all the evidence on Italian wine-growing in the fourth and third centuries BC. Then came Franca Cibeccchini, working on the chronology of the wrecks, and Gisella Thierrin-Michaël and Gloria Olcese on the places of origin of amphorae.¹ We now know of workshops producing ancient Greco-Italic amphorae on Ischia and in Naples at the turn of the fourth and third centuries BC. Although results are not yet definitive and caution is still called for, it is possible, even probable, that the wrecks in the Aeolian Islands dating from the early third century BC and laden with Greco-Italic amphorae with Greek stamps, which have hitherto been deemed to be from Sicily, were in fact carrying amphorae

First published in J. Carlsen and E. Lo Cascio (eds), *Agricoltura e scambi nell'Italia tardo-repubblicana* (Pragmateiai, 16; Bari: Edipuglia, 2009), 91–113.

¹ Van der Mersch (2001); Cibeccchini and Principal (2002); Cibeccchini (2008); Thierrin-Michaël (2000); Olcese, Picon, and Thierrin-Michaël (1996); Olcese (2004). [*On this matter and on the wrecks cited in the following pages, see now the synthesis by Panella (2010).*]

made on Ischia.² About the middle of the third century BC, wrecks carrying Greco-Italic amphorae start appearing off the coasts of Tuscany, Catalonia, and Corsica, and later Provence, where, from the second century, they become more numerous.³

The third century BC thus appears to have been a period of expansion in Italian wine-growing, the time when the first exports of wine from central Italy were added to those from Sicily and Magna Graecia. They were bound, mainly, for Carthage,⁴ as well as for the Levantine coasts of the Iberian Peninsula, in limited amounts before the Second Punic War,⁵ but becoming much more numerous after it had broken out.⁶ From Cartagena at that time we have more than fifteen ancient Greco-Italic amphorae bearing either some of the most ancient Latin stamps⁷ or Greek stamps from Magna Graecia or Ischia,⁸ and there are another twenty or so of these Greek stamps at Mas Castellar de Pontós, an Iberian site near Ampurias, where a total of 2,099 fragments of Greco-Italic amphorae have been found, in levels dating from 220–200 BC, representing at least seventy individual amphorae.⁹ At that period, their presence is less marked in Gaul, except at the *oppidum* of Pech-Maho, where fifty-one amphorae have been found intact and the count of sherds gives a minimum number of individual amphorae of 300.¹⁰ Everywhere, distribution of them was limited to the coast, which was still the case, for the most part, in Tarraconensis in the first half of the second century.¹¹

² Olcese (2004).

³ The Cala del Diavolo wreck off the isle of Monte-Cristo may date from 250 BC. Then, if we rule out wrecks with mixed cargoes, probably part of a local redistribution trade in southern Gaul or in the area of the Balearic Islands and Catalonia, there are two wrecks between 240 and 220, in Tuscany (Meloria A) and Catalonia (Bon Capo = Ametlla de Mar). In the last quarter of the century, we have five wrecks, three in Corsica (Cala Rossa, Tour d'Agnello, Sanguinaires A), one in Sicily (Terrasini B), and one in Gaul at the island of Porquerolles (Pointe Lequin).

⁴ Morel (1998b, 2004).

⁵ Cibecchini and Principal (2002): 'they are recorded all along the Mediterranean seaboard, in rather modest numbers'.

⁶ One example of the contrast comes from Tarragona: on the Iberian site dating from before the Second Punic War, there are three exemplars of Greco-Italic, but a great many after Roman settlement and during the first half of the second century BC (Díaz García and Otiña Hermoso 2002).

⁷ Márquez Villora and Molina Vidal (2005: 161–5); C. Aristo and two exemplars of *Trebios Loisios*.

⁸ Márquez Villora and Molina Vidal (2005: 35–8).

⁹ Pons (2002: 326, 566–74). [More recent surveys of the matter of Greco-Italic amphorae in the Iberian Levant and Catalonia have been published by Molina Vidal (2013) and Tremoleda Trilla, Castanyer Masoliver (2013).]

¹⁰ Solier (1979); Tchernia (1986: 95). Cf. Py, Adroher Auroux, and Sanchez (2001: 45): 'Very limited westward distribution before the second century, with a few exceptions such as Pontós and Pech-Maho.' The gist of this was in Bats (1986: 399).

¹¹ In Catalonia, Sanmartí-Grego and Principal (1998) cite ten locations either on or close to the coast and only one in the hinterland: Molis d'Espigol (near Tàrraga, east of Lleida). There are six fragments (Cura Morera and Sanmartí 1986–8, whereas, between 200 and 175 BC, at Pontós there are 6,385 fragments, giving a minimum of 182 units (Pons 2002: 329).

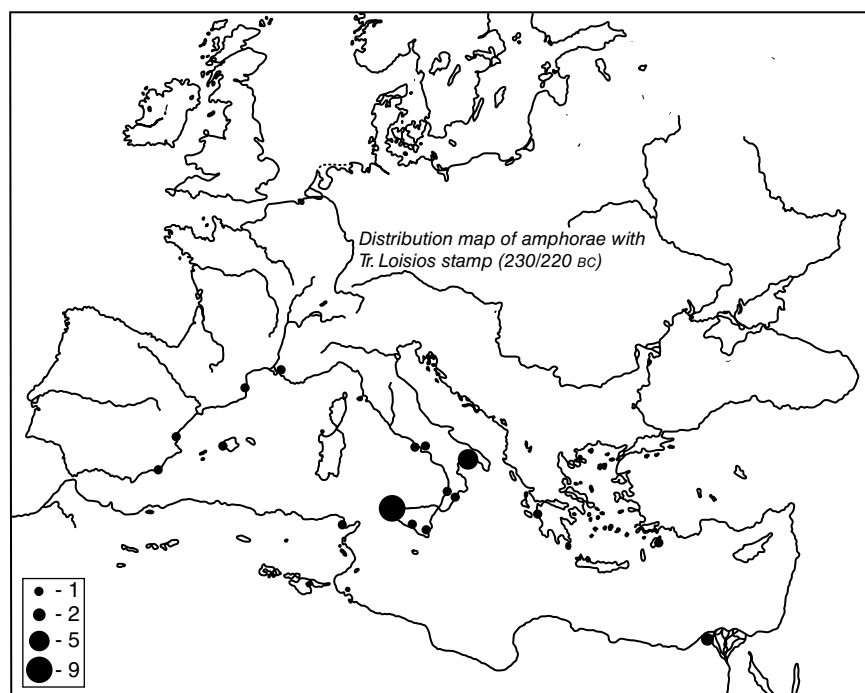


Fig. 18.1. Distribution map of the amphora stamps of *Trebios Loisios*.

We can regard the famous *Trebios Loisios* stamp, now known to be from Campania,¹² as being emblematic of these exports in the late third century BC (Fig. 18.1). It is widely distributed, from one end of the Mediterranean to the other, though restricted to coastal sites.

Then, in the course of a few decades, the whole scene changes completely, as can be seen from a comparative glance at the distribution map (Fig. 18.1) of the *Trebios Loisios* stamp, just mentioned, and Fig. 18.2, showing Greco-Italic amphorae in Gaul. In the first half of the second century BC, amphorae imported from Italy were being delivered to the innermost regions of Gaul. This sharp increase in imports to parts of Gaul far from the Mediterranean can be seen in one very typical site, Paule in Brittany, which most of us would have tended to see as an improbable destination for ancient Greco-Italic amphorae. It was a fortified aristocratic habitation site dating back to the fifth century BC, around which an *oppidum* of about 30 hectares was built in the second century. The site has yielded in all some 7,500 amphora sherds,

¹² Olcese (2004: 179). I am grateful to Clementina Panella for letting me read the pages on the *Trebios Loisios* stamps from her unpublished book on the stamps on Italian amphorae.

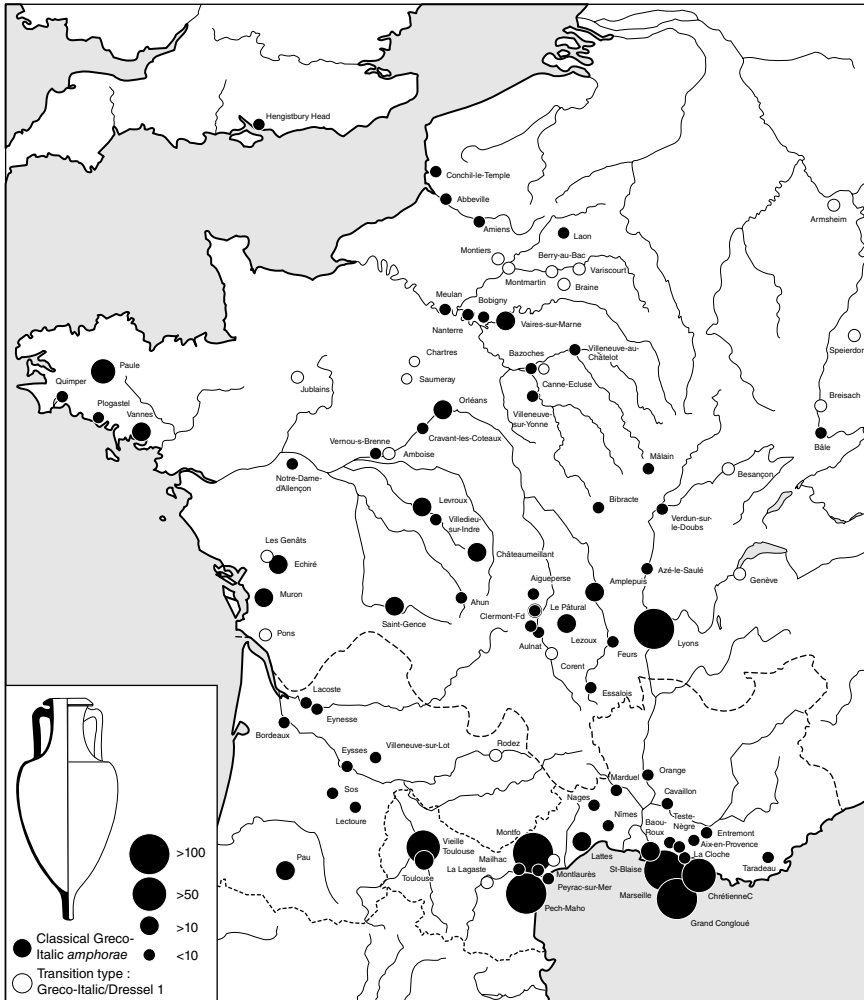


Fig. 18.2. Distribution map of Greco-Italic amphorae in Gaul. (Poux 2004a: fig. 114)

both Greco-Italic and Dr. 1s, representing about 300 individual amphorae. Fanette Laubenheimer draws attention to the presence of five Greco-Italic amphorae in archaeological contexts dating from the early second century.¹³

Such an unexpected and widespread phenomenon cannot be explained by any gradual winning of markets by Roman wine-traders. Certain particular conditions must have existed, amounting to what Matthieux Poux calls 'a revolution in demand'.¹⁴

¹³ Menez and Arramond, (1997); Menez (1999: 365–8; [Laubenheimer et al. (2013)]).

¹⁴ Poux (2004a: 211).

To explain this evidence, I shall start by discussing what the available data enable us to say about the specific use of wine in Gaul at that time. Then I shall attempt to offer a few pointers on the circumstances and causes of this new phenomenon, how it developed, and what brought it to an end.

THE GAULS AND WINE DURING THE LATE LA TÈNE PERIOD

Perhaps a graphic way of explaining the origins of the interpretation I am about to give will be to recount an episode in French archaeological historiography.

Starting in 1979, on the southern slope of the Fourvière hill at Lyons, in what became a monumental zone during the Empire, part of two parallel, V-shaped ditches were excavated: one of them was 2.5 metres wide and 1.5 metres deep and the other 2.3 metres and 1.1 metre (Fig. 18.3). A length of 70 metres was excavated. Abutting the lower ditch at a right angle was the opening to a third one. It is estimated that this arrangement represented a double limit to an enclosure of about 1 hectare. From these ditches, some 15,000 sherds of amphorae were retrieved, Dr. 1s for the most part, greatly outnumbering some Greco-Italics. Altogether, they amounted to at least 700 amphorae. As well as this, the ditches contained evidence of the slaughter of about 60 pigs, along with 788 fragments of dishes and 6 Gallic coins. In 1989,



Fig. 18.3. The ditch of Verbe-Incarné in Lyons.



Fig. 18.4. Woman's skull and horse carcass in the ditch at Verbe-Incarné.

the findings led to a publication that was a model of care and clarity. Following discussion and evaluation of arguments and differing interpretations, the authors concluded that they were dealing with a temporary fortified camp where troops of the Roman army had been stationed.¹⁵ Anything that ran counter to this interpretation was canvassed, discussed, and set aside. The most telling of this counter-evidence was the following: there was a complete lack of any military equipment; the site had been used over several decades, as was attested by the presence of Greco-Italic amphorae alongside homogeneous batches of Dr. 1s (in particular, fifty-nine necks stamped *Sestius*); the amphorae, rather than being unstoppered, had been opened by being systematically chopped off at the neck (beheaded, as it were); there were places where like fragments had been put together—for example, neatly arranged handles without any other part of the vessel; and a horse carcass and the skull of a beheaded woman were lying with the amphorae (Fig. 18.4).

Two years later, the archaeologist Jeannot Metzler, from Luxembourg, offered a view on the matter at the end of his publication on the Clémency tomb.¹⁶ He had excavated a ditch (it had been identified by aerial photography and was thought at first to be a military encampment) inside the Titelberg

¹⁵ Mandy et al. (1989).

¹⁶ Metzler (1991).

oppidum in the land of the Treviri, and found in it very few weapons, many animal bones interpretable as being a kitchen midden, a whole skeleton of a horse, and three fragments of human skulls. He reversed the force of the arguments discussed by the authors of the original article and concluded that what we were dealing with was a Gallic sanctuary—‘a sanctuary that “specialized” in offerings of wine and sacrifices of amphorae by chopping’.¹⁷ The evidence suggested that this place, where a cult had been exercised for several decades, was abandoned during the first half of the first century BC, on an occasion when a ‘farewell banquet’ was held there, after which everything that had been used in the festivity was deliberately left on the spot.

In 2004, in a book of wide scope, Matthieu Poux took this interpretive hypothesis further and applied it to the many ditches and enclosures full of amphorae found in Gaul.¹⁸ A detailed study of the way the amphorae were laid out and their distribution at each of the sites, their association with animal bones showing marks of butchery, and the evidence that the amphorae had been struck with blades, all led him to the conclusion that, in most cases, the large collections of sherds and intact pieces that have been discovered were not mere bits and pieces of amphorae tossed away after their contents had been consumed. On the contrary, at least some of them were ritual depositions; and the enclosures, such as the one at Verbe-Incarné in Lyons, were sites for ceremonial feasting, which may have originally been gatherings of warriors, but became much more inclusive in the last years of the second century BC, when whole populations would unite in assemblies that were not only religious but political and euergetical in character.

The most accurate illustration of this came from Poux’s excavations on the Corent plateau, south of Clermont-Ferrand.¹⁹ Beside a settlement, which was definitely a capital of the Arverni, a sanctuary and its enclosure (about 60 metres square) have been uncovered. In the sanctuary, which later became a Gallo-Roman *fanum*, excavations uncovered a great many sherds of Dr. 1 amphorae, deriving from a minimum number of more than 1,000 individuals, along with 85,000 animal bones, mainly from sheep and goats. The sanctuary is bounded by a ditch dug about 120 BC and filled in about 90 BC. On the surface of the infill, under the wooden covering that was built at that time on top of the former ditch, are to be found remains from banquets (or a single banquet?) deliberately distributed (Fig. 18.5): amphorae and animal bones, but also metallic objects (cooking utensils and the remains of weapons), body

¹⁷ Metzler et al. (1991), 82–4. See, more recently, Maza (2003a, b); Le Mer and Chomer (2007: 540–2), and, for the whole series of the many ditches found in Lyons, Bellon and Perrin (2007: 130–1).

¹⁸ Poux (2004a, b); Paraskeva and Poux (2004).

¹⁹ Poux et al. (2002); Poux (2004a: 491–502; Poux (2006).



Fig. 18.5. Corent: deposit of fragments of amphorae and bones on the surface of the outer ditch of the sanctuary, after it was filled in.

ornaments, and coins. In addition, several fragments of human skulls have been retrieved.

Even more telling is one of the structures inside the enclosure: two libation ditches, surrounded by amphorae resting on their sides, pointing towards the centre, so that their contents would empty into the ditches (Fig. 18.6). They have the appearance of being scaled-down versions, designed for use by the gods, of the famous vats that Luern (the father of the Bituit who was defeated and captured by Fabius in 121) had filled with wine for his great 'election campaign' celebrations (as J.-L. Brunaux calls them).²⁰ According to Posidonius, 'he also made an enclosure twelve stades square, in which he set up vats filled with expensive wine, and prepared a quantity of food so great that for several days all who wished might enter and enjoy what was set before them, being served continuously' (trans C. P. Gulick).²¹

²⁰ Brunaux (2002), 282.

²¹ Cited in Athenaeus, *Deipnosophistae*, IV. 154d-e.



Fig. 18.6. Corent: vats for libations.

But even more than this text of Posidonius, which focuses only on the euergetic and demagogic nature of the feast, Matthieu Poux's ideas recall Tacitus and the Germani:

the mutual reconciliation of enemies, the forming of family alliances, the appointment of chiefs, the question even of war or peace, are usually debated at these banquets...on the next day the matter is handled afresh...deliberation comes when they are incapable of pretence, but decision when they are secure from illusion. (trans. M. Hutton, rev. E. H. Warmington)²²

Not all the deposits of Italian amphorae in Gaul have been discovered in the ditches of enclosures. In westerly parts, pits with amphorae are to be found,²³ along with cult-related wells partly filled in with layers of amphorae. Not everything is identical: there would be much to say on slight variations and regional differences. In addition, as Posidonius says,²⁴ a more individual aristocratic mode of consumption should not be overlooked.

The fact remains, however, that the real motive for delivery of millions of amphorae of Italian wine during the second and first centuries BC was not some peculiar predisposition to drunkenness among the people of Gaul, as

²² Tacitus, *Ger.* XXII. 3–4.

²³ Discussion continues on the proportion of cult wells to water wells in south-western Gaul; see Gorgues and Moret (2003); Verdin and Bardot (2007). Many of them, however, are beyond doubt; on the lands of the Ruteni, see Gruat and Izac-Imbert (2007).

²⁴ In Athenaeus, IV. 152c.

was so often alleged in ancient texts. Feasts, with collective and ceremonial imbibing, were part of obligatory social and religious rituals. These banquets, planned well ahead of time, must have required punctual ordering of wine from Italian traders who could then organize massive deliveries.²⁵ And, just for good measure, let us think of a very different cultural environment with completely different customs, the English court in 1309, where, just for Christmas, 1,000 casks were ordered from Bordeaux, making almost 9,000 hectolitres, equivalent to 35,000 amphorae!²⁶ Essentially, such colossal distribution of Greco-Italic and Dr. 1 amphorae in Gaul is a consequence of behaviours peculiar to Celtic populations, which we can now make sense of via archaeology, interpreting written sources in the light of its discoveries. What still has to be explained, however, is why this phenomenon emerged in the early second century BC.

BETWEEN CATO AND CAESAR, FROM GOLD TO SLAVES

Inner Gaul, which in the sixth and fifth centuries BC received small numbers of amphorae from Massilia and even fewer from Etruria, as well as Attic pots and Etruscan bronzes, became completely closed to imports from the Mediterranean after the disappearance of the Hallstatt warrior chiefdoms at the end of the fifth century. Power was more fragmented, divided among warlords whose legitimacy rested on their military prowess. Posidonius described their bellicose banquets, with their strictly codified and hierarchical procedures, where there was also fighting among individuals with grudges to settle. With the extension of military recruitment in the second century, a great many more men could participate and even play a part in the making and unmaking of kings. It may have been in such a context that wine, in vastly greater quantities than in the late Hallstatt, was once again imported. Given the lack of sources, it is of course impossible to do anything other than hazard hypotheses and conjectural reconstructions.²⁷

The sequence of events can be plotted with much greater accuracy when things are seen from the point of view of supply—in other words, as a function of the extension of the Roman Empire at the end of the Second Punic War. With the establishment of the province of *Tarraconensis*, the Romans had for

²⁵ A well-studied site such as the one at Fesques (Seine-Maritime) in Gallia Belgica, hence without amphorae but with evidence of banqueting, is interpreted by Brunaux (2004: 142–5), as ‘a symbolic enclosure where a gathering of several thousand people would banquet’.

²⁶ Kirkbride (1971: 177).

²⁷ Brunaux (2002; 2004: 129–62); Poux (2004a: 194–6, 363–76).

the first time direct and ongoing contact with the peoples of southern Gaul. It is even beginning to appear more and more likely that Roman control of part of Languedoc dates from then. In 195 BC, Cato installed a *praesidium* at Ampurias. It was inevitable that traders also started operating there and that Italian wine was brought in.

We must now take another look at the amphorae with inscriptions in Iberian characters found at Vieille-Toulouse.²⁸ They are Greco-Italic; they probably date from the end of the first half of the second century BC (though there are older Greco-Italic amphorae at Vieille-Toulouse); and they were found in cult-related wells. Michel Lejeune interprets the inscriptions as having two elements: first a name, then a numerical indication. Some names are repeated on several amphorae. The authors note in all twelve types of inscriptions, which provide as many names. In one case, though the numerical indication is still in Iberian characters, the name is written in Latin letters: Q. Ofeli. In four cases, a Latin name can be recognized in Iberian script: Fabrici, Vinuci, Curti, and Sesti (or Sexti). The others would appear to be abbreviations of Iberian or Gallic names.²⁹ The most judicious of the various interpretations given of the inscriptions seems to me to be that proposed by Michel Bats in 1988:

It is difficult not to notice analogies between these inscriptions and the *tituli picti* of the imperial amphorae and to see the names as those of traders engaged in their distribution, ship owners, *mercatores*, *diffusores*, owners of a batch of them or of a whole cargo; and the figures could indicate for example the number of amphorae assigned to each of them. If the amphorae traded originated in Italy or Sicily, the inscriptions may have been painted on either at the unloading port (Narbo or one of the other harbours along the Iberian seaboard) or at the loading point in a redistributing port such as Emporion may have been.³⁰

This idea of Bats's, though far preferable to the one launched by the authors of the original publication (that the inscriptions named the consignees of the amphorae), still requires some teasing out. At that period, traders' names were not written on the sides of amphorae; they were stamped on the stoppers. Any name written on the sides means that the amphorae concerned became the temporary property of a second trader who sent them on. Of the towns named by Bats, Ampurias seems to me the most likely to have served as a base for such traders. That, however, is not the real point. More noteworthy is that the very same activity was being carried on by Romans (Ofelius, Fabricius, Vinucius, Curtius, and Sextius) and Iberians or Gauls living in the same place. The various lead tablets inscribed in Iberian characters found in that

²⁸ Lejeune (1983); Vidal and Magnol (1983).

²⁹ My earlier suggestion (Tchernia 1999), that all the names should be read as Latin, made no sense and should be ignored. It led to the creation of implausible abbreviations.

³⁰ Bats (1988: 139). See also Domergue et al. (2002b).

area, dating from the fifth to the second centuries BC, show that Iberian was the language of commercial exchange;³¹ the lead letter from Pech-Maho in the fifth century BC has quite properly given rise to the idea that trading between the Elysici and the Greeks was a familiar thing.³² I shall therefore assume that there was cooperation among Roman traders probably established at Ampurias and Iberian or Gaulish traders. They it was who must have opened the route allowing Roman wines to reach the peoples of western Gaul. Most of the sites rich in Greco-Italic amphorae, at any rate the older amphorae, seem to lie west of the Massif Central.³³

The lands of the Lemovici in particular offer sites where successive discoveries are being made of Greco-Italic and Dr. 1 amphorae. At Saint-Gence, about 15 kilometres north of Limoges, excavations carried out since 1998 have yielded some 2,000 individual amphorae.³⁴ If we go farther north, to the likely limit of the Lemovici territory, Châteaumeillant has been known for a long time as a rich source of amphora pits or cellars; and recent excavations have turned up more of them. They have brought to light several Greco-Italic amphorae.³⁵ A significant proportion of the amphorae from Saint-Gence, about a quarter or a third, are Greco-Italic, which constitutes the largest concentration of them in France. From the profile of one of these, which is intact except for the toe, we surmise that it may date from the very early second century.³⁶ On most sites along that axis, the peak of imports seems to have been reached about the end of the second century; they start to drop soon after the start of the first century.

The Saint-Gence site lies at the centre of the goldfields of the Limousin region, which had been worked by the Gauls since the late fifth century BC.³⁷ Panning for gold took place in the rivers of the piedmont of the Pyrenees. This, rather than the looting of the Delphi treasure, was probably the source of the *aurum tolosanum*, the fabulous hoard that disappeared in 106 BC while in Caepio's possession.³⁸ Gold may actually have been what the Iberian and Roman traders were after in the first place, the thing that motivated the first

³¹ Bats (1988); Solier and Barbouteau (1988); Sanmarti-Grego (1993); and for a new discovery at Ruscino, where older Greco-Italic amphorae have been found, one of them with the stamp *M. LVRI*, attested at the end of the third century BC at Pech-Maho and Aleria, see Kotarba et al. (2007: 451–2).

³² Ampolo and Caruso (1990–1: 47). See also Garcia (2000); and, for a summary of the current state of scholarship on the matter, with its historiography, see Decourt (2000).

³³ See Fig. 18.2 and Loughton (2003: figs 11, 13). But there are a few older Greco-Italic amphorae, dating from the early second century, in the lands of the Arverni (Loughton and Jones 2000).

³⁴ [Lintz (2012).] I am extremely grateful to the author for all the information he gave me before publication.

³⁵ Krausz (2008). For the earlier bibliography on the Greco-Italic amphorae from Saint-Gence, Châteaumeillant, etc., see Tchernia (1986: 96, n. 160).

³⁶ Reproduced in Bats (1986: 397, fig. 2, amphora no. 1).

³⁷ Cauuet (1999).

³⁸ Domergue and Moret (2002).

exchanges of Italian wine. Not far from the Paule site, already mentioned, is a river with a most revealing name, the Doré (meaning 'Golden'), where to this day gold panning still takes place, as it does also in several other tributaries of the Blavet. This may be a reason why such old amphorae are to be found in such a remote site.³⁹

The scale of deliveries of Italian wine changes with the transition from Greco-Italic amphorae to Dr. 1s and the establishment of the province of Narbonensis. On the map in Fig. 18.7, each dot represents ten times the number of objects as shown on Fig. 18.2. In areas such as the lands of the Aedui and the Sequani, where hardly any Greco-Italic amphorae have been found, Dr. 1s are everywhere. In Arverni territory, where there were a few Greco-Italics, there was a similar increase.⁴⁰ At all the sites in central Gaul where amphorae have been found in their thousands, and especially those in the lands just mentioned, the material can be dated to the final quarter of the second century BC or the first half of the first century. The numbers do not decrease, at least until the time of the Gallic Wars.

Traders were establishing bases ever closer to independent Gaul. By 118 BC, there was a garrison in Tolosa. It inevitably attracted traders and wine. In Lyons, in the fortified site at rue du Souvenir, material from the demolition of a long building with a portico shows that it was covered in tiles of terracotta and limestone, that its floor was of mortar, and that its interior was decorated with paintings in the Pompeian First Style, the only ones in independent Gaul. Part of the filling in the ditches round it was nearly 14,000 sherds of Greco-Italic and especially Dr. 1 amphorae, amounting to at least 761 units. The building seems to have dated from the late second century BC. One explanation that has been offered is that it was an establishment of Roman traders operating within Gaul.⁴¹

For the first century BC, it is impossible to ignore the oft-quoted passage from the *Pro Fonteio*, 11: *Referta Gallia negotiatorum est, plena ciuium romanorum* ('Gaul is packed with traders, crammed with Roman citizens') (trans. N. H. Watts). Although the meaning of the word *negotiator* as used during the Republic has been lengthily debated,⁴² a good many of the men so described must have been occupied, among other things, in importing wine to Gaul. The presence of Roman traders in three places, Nevers, Orleans, and Chalon-sur-Saône, happens to be mentioned by Caesar because he writes

³⁹ On the whole matter of mining in Gaul, and on Brittany gold, see Domergue et al. (2006); on the toponymy of gold and gold panning in Gaul, see Paillier (2006). What exists at Paule may be a private sanctuary in a rural property: see Arcelin and Brunaux (2003b: 247).

⁴⁰ Loughton and Jones (2000): 'Unlike the Dr. 1 type of amphorae... the Greco-Italics are few in number.'

⁴¹ Le Bot-Helly and Bodelec (2003); Plassot and Desbat (2003); Maza (2004); Desbat (2007b: 179–80); Le Mer and Chomer (2007: 765–8).

⁴² See the latest instance in Verboven (2007c: 102).

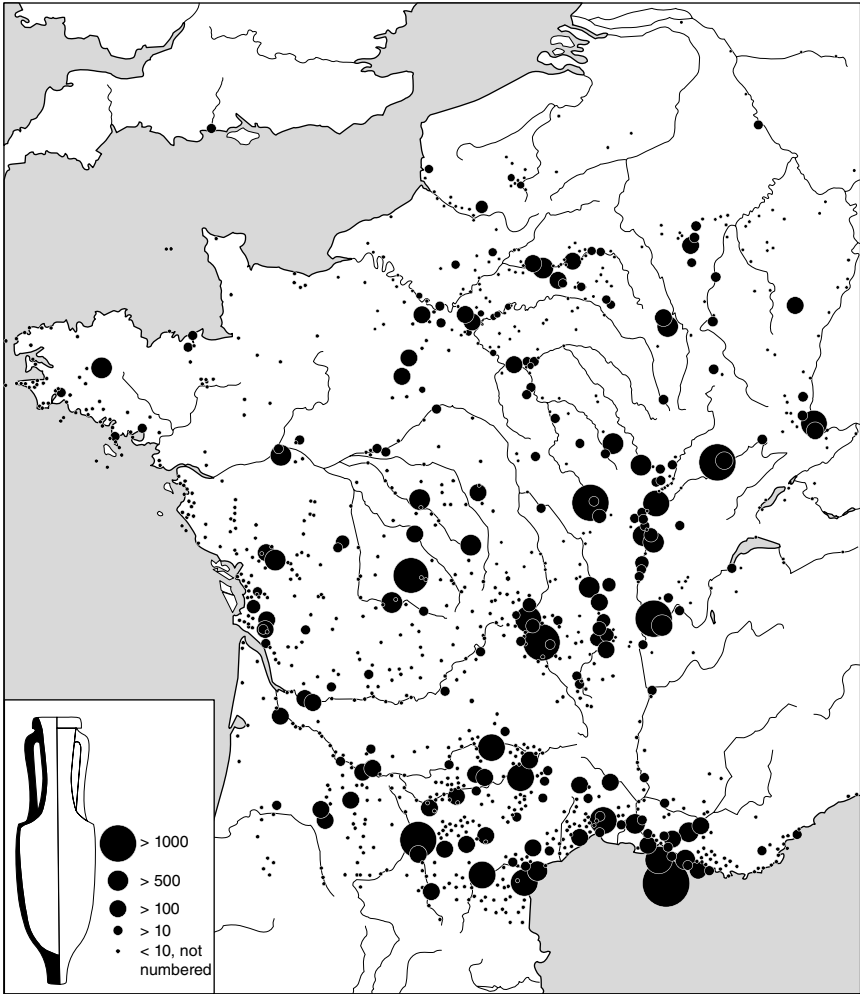
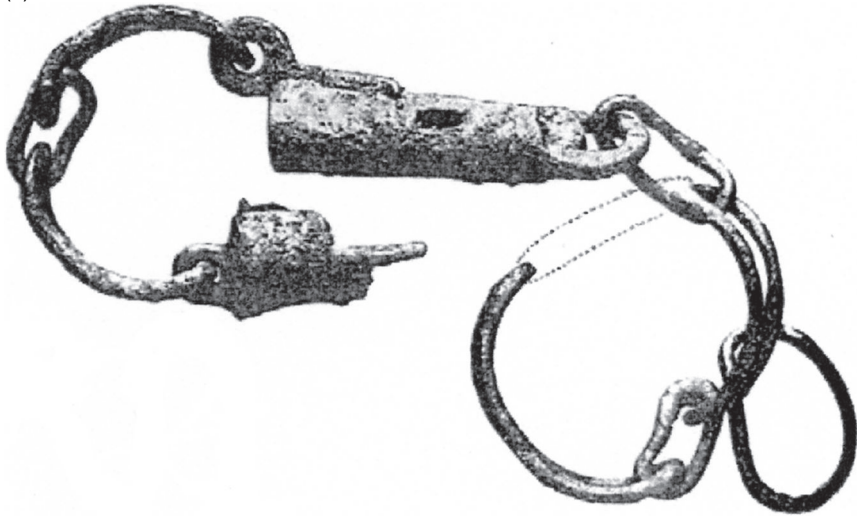


Fig. 18.7. Distribution map of all Greco-Italic and Dr.1 amphorae in Gaul. (Poux 2004a: fig. 118)

about massacres carried out by Gauls. In Chalon, many amphorae have been found in the bed of the Saône. What is significant about Chalon is that it is the place where roads branch off towards Bibracte and Besançon, two of the richest Gallic sites for amphorae, which are found there by the tens of thousands.

There are two archaeological discoveries that may enable us to say more about the activity of the Chalon traders. In 1913, Joseph Déchelette announced the retrieval of three identical slave fetters from the bed of the Saône in Chalon. Almost seventy years later, another one was found, also in the bed

(a)



(b)

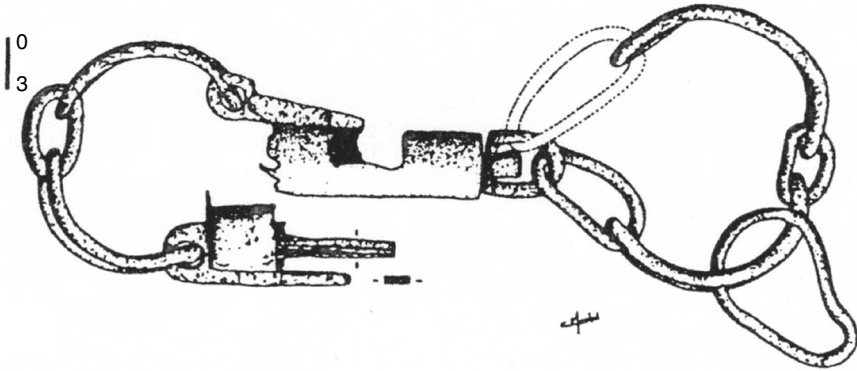


Fig. 18.8. Fetters found in the bed of the Saône near Chalon. (Déchelette 1914; Daubigny, Guillaumet 1985)

of the Saône, a few kilometres upstream.⁴³ They are all exactly superimposable (Fig. 18.8); and they suggest that slave fetters were being mass-produced in that area. Daubigny and Guillaumet believe this type of fetter was well suited to chaining troops of slaves together as they advanced in caravan. In 1983, I canvassed other evidence for slaves being bartered for wine; and today I am more inclined to see the evidence as even more convincing than I found it then, even if the numerous finds of amphorae in mines suggest that some

⁴³ Déchelette (1913; 1914: 1392–3); Daubigny and Guillaumet (1985).

of the exchanges entailed metals. I shall come back to this at the end of this chapter.

All this activity was to cease after the Gallic Wars, at the latest. There are two possible reasons, in no way contradictory, why this exceptional trade came to an end. The first is that, once Gaul had been reduced to a province, chieftains could no longer enslave their people; and the wars had provided Caesar and his troops with such great numbers of prisoners to be sold into slavery that there was less need to have recourse to barter. The second reason is that, as Matthieu Poux says, the gatherings at which much of the imported wine was distributed and drunk must have been forbidden by the Romans as potentially seditious.

This closed a period the beginning and end of which depended on demand from Gaul. Anthropology, and not economics, is our key to its interpretation. The huge discoveries of amphorae are the opposite of evidence for the Romanizing of Gaul. The presence there of Italian amphorae is sometimes argued to mean that independent Gaul had been integrated into the Mediterranean economic network. But what it really shows is the inception and the conclusion of a system of bartering that was self-contained in space as well as in time. This was, of course, part of the standard practice of exchanging wine for slaves in non-Roman territories; and I shall come back to that. But there was no economic link between these different networks.⁴⁴

EFFECTS ON ITALIAN WINE-GROWING REGIONS: EXPANSION AND COLOUR

Attempts have been made to assign amphorae to the area of Italy where they were produced, basically via visual inspection of the clay or of the stamps, if there are any. This has provided us with some broad outlines and identified areas where there is a preponderance of deliveries from particular regions of Italy. However, it is still difficult to see a clear general picture. What does appear quite clearly is a statistical difference in regions of origin by period. The shift in scale that came about in the final quarter of the second century BC especially benefited growers in the *Ager Cosanus* (southern Etruria). Amphorae from there are very much in the majority in areas where Greco-Italics had hitherto been absent, including Aedui territory, this being particularly marked within the 300,000 sherds retrieved at Bibracte between 1984 and 1998. These amphorae are also by far the most frequent in the

⁴⁴ The same conclusion has been cogently drawn from my earlier observations by Bang (2002: 7–8).

territory of the Arverni, accounting for 75 per cent of the total, according to Fabienne Olmer.⁴⁵ There is no evidence that deliveries of wine from other regions, notably Campania and southern Latium, were decreasing. They now represent, however, a small proportion of a total that has greatly increased.

The stamps with two letters on Dr. 1 amphorae lend themselves to closer examination. Fabienne Olmer has shown that they were a code for distinguishing series in production. She has counted some 685 of them in Gaul and Germania, most of which (two-thirds of the 148 discovered at Bibracte) are stamps impressed on the lower part of the handle. In Italy, some dozens have been found in the *Ager Cosanus*, on Monte Argentario, and in the workshop at La Parrina, 5 kilometres inland. Very rarely do any of them turn up elsewhere: a few in Sardinia,⁴⁶ seven in Rome (according to Fabienne Olmer), some of which do not belong to the same group.⁴⁷ From other parts of Italy, she mentions only three, one of which came from a workshop at Minturnae and another from a producing region, Formiae.⁴⁸

The conclusion seems inescapable: in the main, amphorae with stamps of two letters on the handle were exclusively intended for export to Gaul. In the *Ager Cosanus*, and perhaps also in Minturnae and Formiae, production of these amphorae was added to the output of already existing workshops. New vineyards specializing in trade with Gaul were planted in the wine-growing areas. At Albinia, where very large amphora workshops have been discovered, covering an area of 20 hectares, with a kiln floor of 28 square metres, the growth in wine production must have been enormous. What can be said about this?

Columella⁴⁹ and Palladius⁵⁰ urge wine-growers not to cultivate vines with black grapes (the latter specifies *nisi in prouinciis*). All the great Italian wines whose colour is known to us were white. In short, unlike the Greeks and the Gauls at the time of the Empire, Italian drinkers appear to have appreciated only white wine. But evidence of various kinds suggests that, both at the time of Hallstatt wine-importing and during the late La Tène, it was the redness of wine that impressed the Gauls.

In 1986, V. Kruta linked the presence of amphorae of Massilian or Etruscan wine with the making of coral inlays on *fibulae* or pitchers from the end of the Hallstatt period, seeing both of them as elements of the same belief system. More recently, Frank Perrin has discussed this, basing his study on a thorough archaeological examination of objects with coral inlays. In aristocratic tombs dating to the sixth and fifth centuries BC, he has identified *fibulae* on which there is a barely visible ornamental element representing in miniature

⁴⁵ Olmer (2003: 209–16; Olmer and Maza (2004).

⁴⁶ Sotgiu (1971).

⁴⁷ One must set aside the L.M on the lip of a Falernian amphora and the AT with a heart-shaped symbol.

⁴⁸ Olmer (2003: 157–72).

⁴⁹ III. 20, 4–5.

⁵⁰ II. 6.

variously shaped vessels. The coral inlay stands for the contents of these; it is, he says, 'the representation of a novel commodity, trade in which was established at that time, Mediterranean wine'. And the wine in question was obviously red.⁵¹

These references are outside the chronological scope of my subject; but the same cannot be said of Matthieu Poux's ideas. Once he had understood the Gauls' wine-drinking as belonging to a context dominated by ritual, there was a logical inevitability in the association with blood. He makes the point that there is something manlike in the construction of an amphora, with its neck, shoulder, and belly, which is why he sees it as 'a living symbol and sacrificial substitute', the chopping-off of amphorae at the neck being 'part and parcel of the same symbolic realm as beheading'. 'Putting them to the sword, splitting them open or decapitating them so that their contents spurted out and ran into gutters and cavities had all the ingredients of a spectacular liturgy.' What made wine preferable to beer was first and foremost its colour, 'a metaphor of blood, closely linked to notions of immortality and sacrifice'.⁵²

Brilliant as they are, these interpretations would remain theoretical and in the realm of the imagination could we not support them with at least one archaeological fact: the amphorae from the La Madrague de Giens wreck, which contained red wine. In my publication about the excavation, I stated mistakenly, 'There can be little doubt that these amphorae contained Caecuban, one of the best Italian wines of that period.'⁵³ In fact, Caecuban is a wine from white grapes, perhaps capable of producing a noble-rot wine that turns flame-coloured after much ageing.⁵⁴ The wine in the amphorae from this wreck was from the same area, but it had nothing to do with such a great wine. It may have been produced by one of the newly planted subsidiary vineyards, already mentioned, of which there were so many.

When exchanges with independent Gaul collapsed, for the reasons I have given, these black grape vines had to be got rid of. Either they disappeared or there was replanting. Columella's text gives an idea of the trouble that entailed. Some of these vines were still growing at his time. He says that the choice of grape varieties is the bane of the wine-grower's life, as telling them apart is so difficult. This is why it is a responsibility for the *dominus* himself; it should not be entrusted to the *uilicus* or the *uinitor*, for even now, he says, 'it has been the lot of very few farmers as yet to be free from stock that produces black wine, though the colour of the grape may be detected even by the most inexperienced person' (trans. H. B. Ash).⁵⁵ Over nearly a century,

⁵¹ Kruta (1986); Perrin (2000).

⁵² Poux (2004a: 339–40, 394).

⁵³ Tchernia, Pomey, and Hesnard (1978: 13, 15). See also the cover of Tchernia (1986).

⁵⁴ Galen, X. 834.

⁵⁵ III. 20, 5: cum, quod longe sit facilius, adhuc perpauca agricolis contigerit ut nigri uini stirpe careant, quamuis color uini possit uel ab imprudentissimo deprendi.

unremitting efforts to get rid of the black grape varieties planted for the Gauls had still not quite succeeded. The greatest difficulties encountered by Italian wine-growers in the late Republic and early Empire were in this area.

CREATION OF A SPECIALIZED MERCHANDISE

During the course of the second century BC, the Romans created a specialized merchandise. Red wine was to the Gauls what European chintz was to Africa in the eighteenth century.

The bartering of wine for slaves is a standard topic, with its inevitable quotations from Strabo⁵⁶ and mention of the stele of Aulos Kapreilios Timotheos.⁵⁷ But not all its implications have been fully appreciated. Many of the numerous wine-traders known from inscriptions on the stoppers of Greco-Italic and Dr. 1 amphorae must also have been slave-traders.⁵⁸ Scholars who persist in maintaining that owners of vineyards busied themselves with marketing their own wines overseas should also say whether they believe that these owners also undertook to sell off the products of the exchange.

Let us imagine that the slaves were transported in amphorae. We would include imports of them in our counting of sherds showing the evolution of trade with Italy. On histograms for the second and first centuries BC, there would be a peak of slaves from Gaul. We should also have discovered dozens of wrecks of slave ships that foundered between Delos and Italy, yet of course not a single one is known. Yet such sad sinkings must have happened as often as any other sort. Our present practice is to make a careful count of all wrecks laden with amphorae containing, say, salted-fish products and of all the sherds surviving from such amphorae at sites on land. According to Polybius, salted products are superfluous, just like wax and honey. Slaves, on the other hand, are essential to life.⁵⁹ Most historians now agree that, from the early years of the Empire, the great deliveries of foreign slaves to Italy began to decline significantly. (Whether the slave population was renewed by natural reproduction or by bringing up abandoned children who had been taken in for the purpose of being enslaved remains a matter of disagreement.⁶⁰) In this area,

⁵⁶ V. 1, 8 and XI. 2, 2.

⁵⁷ See Duchêne's interpretation (1986).

⁵⁸ See mainly Hesnard and Gianfrotta (1989). The commentary on C. Sornatius (Hesnard and Gianfrotta 1989: 425) should be supplemented with Harris (1980: 129–30); Coarelli (1982: 135); and Zevi (2005: 822–3).

⁵⁹ Polybius, IV. 38, 4: 'For as regards necessities it is an undisputed fact that the most plentiful supplies and best qualities of cattle and slaves reach us from the countries lying round the Pontus, while among luxuries the same countries furnish us with abundance of honey, wax, and preserved fish...' (trans. W. R. Paton).

⁶⁰ Harris (1980, 1999); Giardina (1997: 251 ff.); Scheidel (1997); Lo Cascio (2002).

Italy's imports were thus fewer and local production greater, which is the opposite of what we have seen obtained with wine and oil. Changes to the supply of a commodity of considerable economic importance,⁶¹ so essential to life, as Polybius says, and so intricately linked to the wine trade, must be incorporated without qualms into the history of the economic upheavals attending the start of the Empire and should also be taken into account in the modelling of them.

⁶¹ See recently Zevi (2005: 822–4 and his bibliography n. 18).

The Economic Crisis in Imperial Italy and Competition from the Provinces

In 1992, at a conference on Italy from Augustus to Diocletian, Domenico Vera began his paper with these words: 'A spectre, unspoken of but full of foreboding, hovers over the proceedings of this conference: the economic crisis in imperial Italy.'¹ As we know, this idea, which dates from Rostovtzeff's *Social and Economic History of the Roman Empire* (1926), contradicts the traditional image of the Golden Age of the Antonines, handed down from Gibbon: that the period from Trajan to Marcus Aurelius was the time of the Roman Empire's greatest flourishing. Rostovtzeff, on the other hand, saw it as a time of a serious developing crisis, caused by the economic crushing of Italy by the provinces. Since the 1970s, this way of seeing things, whether disputed, transformed, or reaffirmed, has come to loom large in historiographical debate.

Rostovtzeff's argument, which informs the whole book, was this: in Italy, during the late Republic and the early Empire, the most efficient agricultural estates, those 'run on scientific lines', with the primary aim of producing oil and wine, were owned by a middle class (his word is *bourgeoisie*); under the Julio-Claudians, the economic emancipation of the provinces closed down the export markets for these products and impoverished the landowners, whose estates were then bought up by 'big capitalists' who brought a *rentier's* mentality to the running of them, seeing them as a source, not of commercial profit, but of reliable if modest income. The disappearance of 'scientific' and productive agriculture was a concomitant of the loss of the middle class. Rostovtzeff stresses how gradual these events were; and, though his dating for their onset and early effects is relatively clear (the Julio-Claudian period and the late first century AD), the dating of their culmination is not: in the first half of the second century, we see Italy still being properly husbanded,² so its

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¹ Vera (1994): 'Un fantasma innominato, eppure incombente, si aggira fra i lavori di questo colloquio.'

² Rostovtzeff (1957: 194).

'decay' or 'economic decline', mentioned several times, must have come about after that time, though this is not specified.

While no one nowadays would venture to speak of a *bourgeoisie*, even in italics, or to suggest that the great productive villas were the property of a middle class, Rostovtzeff's argument, though transformed and adapted to an explanation deriving from the internal contradictions of 'a slave-based mode of production', has been largely retained, albeit with variations, by scholars who have discussed the economic crisis in imperial Italy. The main elements are, as regards facts, the assumed collapse of olive-growing and wine-growing (archaeological discoveries having turned Rostovtzeff's term 'scientific agriculture' into 'the villa system'); and, as regards interpretation, competition from the provinces and the increased size of estates making a workforce of slaves non-profitable. A different production system, more focused on cereal crops or the raising of livestock (an idea deriving from Rostovtzeff himself), gradually grew up.

This interpretation, which had long been accepted as authoritative in Italy, has more recently been subjected to penetrating analysis by Italian historians.³ The radical position of, for instance, Andrea Carandini (whose definitive statement was the blunt sentence: 'The Golden Age of the Antonines was the time of Italy's collapse')⁴ has been tempered by much qualification and historical complexity. Most recently, a lucid article by Andrea Giardina has shown that much of the confusion in the discussion arose from the ambiguity of the word 'crisis', which has at times been used in its everyday sense of a sudden phase of recession and at others in the Marxist sense of a slow running-down of a socio-economic form in the process of being replaced by another.⁵ Giardina broached an essential matter, hitherto ignored: the new sources of supply of slaves. Under the Empire, the huge influx of people taken prisoner in the wars of conquest came to an end, as did the purchases from pirates in the East or tribal chieftains in Gaul. Much more use was made of slaves born and bred locally and exposed infants were recovered for the purpose. The enslaved adult workforce, uprooted from its distant origin, was replaced by an enslaved workforce of domestic origin, who could not be used in the same way; and this brought about changes in the structure of production. Giardina also highlighted the problems implicit in the theory of competition from the provinces: we have no knowledge of any differences in the mode of production that might explain the success of the provinces (Rostovtzeff's idea was actually that this success was the result of the Italian mode of

³ Lo Cascio (1991a); Vera (1995); Giardina (1997).

⁴ Carandini (1989a: 117): 'L'aurea età degli Antonini è stata per l'Italia il momento della rovina.'

⁵ It should be noted that Rostovtzeff uses 'crisis' only in relation to Domitian's edict intended to limit the extension of vine plantings, and that elsewhere he uses 'decay' or 'economic decline'.

production being adopted in the provinces); the idea that agriculture was practised in the same way throughout Italy is misleading; and, in particular, too much time elapses between the end of Italian exporting (which dates from the time of Augustus, as is now proved by the evidence from the amphorae) and the changes in the structure of production. Giardina does stress, however, in his conclusion that no single cause can account for a phenomenon of such complexity; and he accepts competition from the provinces as a cause among others contributing to the demise of the villa system as it existed in the later years of the Republic.

Now that discussion of the matter is well under way, though not yet settled, it may be worthwhile to look again, starting from Rostovtzeff, at the relations, past and present, between the basic data and the systems of interpretation. In so doing, so as to stay within my own area of competence, I shall draw mainly on evidence from pottery.

In the breathtaking mass of erudition exploited by the great Russian historian, it is not always easy to isolate the sources and facts that ground his theory or to see a clear link between what are precise references and what are deductions. If one takes the view that we are dealing with a zero-sum game, then of course we could deduce Italy's economic decline from the development of production in the provinces, which is even more obvious nowadays than when Rostovtzeff was penning his eloquent descriptions. If we then look in *Social and Economic History of the Roman Empire* for positive signs of decline, it seems to me that there are only four: that, in the provinces, Arretine terra sigillata pottery, made in Italy, was replaced by pottery from Gaul, some of which was found even in Pompeii;⁶ that the towns destroyed by Vesuvius were not rebuilt;⁷ that Ostia came to have an advantage over Puteoli, which could no longer prosper from the return cargoes previously afforded by Campania's agricultural prosperity;⁸ and Domitian's edict on the overproduction of wine.⁹

The last three of these points have all been variously interpreted or even refuted and I do not propose to discuss them further.¹⁰ I do, however, have something to say on the terra sigillata pottery.

ITALIAN TERRA SIGILLATA POTTERY

It is now accepted that, at least in the case of plain ware, there was a seamless transition from what is known as Arretine pottery and the Late Italian variety,

⁶ Rostovtzeff (1926: 94, 173, 575, n. 13).

⁷ Rostovtzeff (1926: 194–5).

⁸ Rostovtzeff (1926: 163).

⁹ Rostovtzeff (1926: 202–3).

¹⁰ See, among others, D'Arms (1974); Pagano (1995–6); Giardina (1997: 240, 259, n. 19); Soricelli (1997, 2001); Pappalardo (2001); [see pp. 81–2].

production of which continued until the middle of the second century AD. However, the Arretine is of much finer quality than the Late Italian, and it is more widespread in its distribution. At the time of Augustus, it is to be found along all the coastlines of the Mediterranean basin and all over Gaul, where a sizeable proportion of the vessels came from 'branch workshops' established in Lyons. Then it becomes less prevalent at the time of Tiberius, and its former place is to some extent taken by ware from the south of Gaul, in particular from the workshops at La Graufesenque near Millau. Products from these workshops can be found even in Italy. Rostovtzeff's discussion drew on this fact, of course. However, it has since been re-evaluated and can be explained differently.

The presence of vessels from southern Gaul in Pompeii has long been seen as emblematic of the success of competition by Gauls and the decline of Italy's productive capabilities. Early in the twentieth century, Joseph Déchelette published eighteen of these vessels, which he had seen in the museums at Naples and Pompeii. His conclusion was so close to Rostovtzeff's ideas, and even to his choice of words, that it is surprising the Russian did not cite him: 'The development of sigillata work in the provinces of the Empire had come to represent serious competition for the Italian workshops and had brought about a fall in prices.... This industrial conflict, in which Gaul was to triumph, scuttled the reputation and the prosperity of the Arretine products.'¹¹ Some years later, Déchelette's observations were to be confirmed in a way that seemed even more striking; and this time Rostovtzeff did take up the point: the publication in 1914 of a crate that had not been unpacked found in a house in Pompeii on 4 October 1881. The contents, apart from lamps from the north of Italy, were ninety bowls from La Graufesenque.¹² Here was a fine example of the vanquishing of Italian ware by the competition from Gaul; and the crate is sometimes referred to even today. However, in 1977, Giuseppe Pucci made a further study of all terra sigillata pottery from Pompeii, demonstrating that pottery from southern Gaul was in fact of marginal importance (14 per cent), after eastern sigillata (28 per cent) and especially Late Italian (57 per cent). Either the vast majority of the Gaulish wares feature relief decoration or a slip has been applied to give a 'marbled' finish.¹³ The same observations have been made more recently by Archer Martin and Giorgio Rizzo about pottery in Rome and Ostia,¹⁴ except on eastern sigillata, which is much rarer there than in Pompeii: Italian pottery is by far the greater part of fine wares; small numbers of sigillata from southern Gaul make an appearance in the last years of Claudius' reign and under Nero, rise to between 7 per cent and 15 per cent under the Flavians, drop to 5 per cent under Trajan, and then disappear. Here, too, decorated or marbled ware makes up the vast majority of the Gaulish ceramics.

¹¹ Déchelette (1904: 116).

¹² Atkinson (1914).

¹³ Pucci (1977, 1986).

¹⁴ Martin (1992); Rizzo (1998).

This is not the case with Italian pots, which had in fact lost or almost lost all decoration during the period from Claudius to Domitian.

During the reign of Augustus, Arretine sigillata was an elegant product, meticulously finished, and decorated, if at all, with tasteful reliefs in imitation of embossed metalwork. It was designed for a difficult market niche: high-quality ware made from a material seen as irredeemably low, at least by the Romans in Italy: terracotta. In the first century AD, glass was becoming more and more widespread. In the excavation storerooms at Pompeii, glass vessels are more abundant than fine ceramic ware. Yet, unlike pottery, glass remained basically a quality material,¹⁵ filling the gap between silverware and plebeian dishes. The latter were bound to develop towards productions that were as cheap as possible. This is what brought about the decline of Arretine pottery. In Italy, sigillata from Gaul, with its decorated pots and original marbled glaze, did nothing more than satisfy the small number of customers who yearned for days of yore and the Augustan Arretine.

AMPHORAE AND VILLAS

Nowadays, the decline of Arretine pottery is rarely mentioned in discussion of the economic crisis in imperial Italy. Its evidentiary value has been swamped by the count of amphorae of varied provenance found at the centres of consumption, the identification and dating of the workshops where they were produced, and field surveys with the aim of determining changes in the density of settlement and the ways in which the land was exploited. These factors are the new evidence that has meant that Rostovtzeff's theory has been rehabilitated on other grounds, without taking much account of the chronology he proposed (or ignored). The way these new data can be combined, however, is not simple and straightforward. After an initial attempt to see them as parallel or at least compatible with each other,¹⁶ scholars had to conclude that they were dealing with different timelines.¹⁷

The evidence from the amphorae, like the evidence from the field surveys, is not immune from criticism. As regards the amphorae, there are two reasons for this: changes are assessed according to percentages, which do not represent

¹⁵ Morel (1979).

¹⁶ Carandini (1981: esp. 252).

¹⁷ Carandini (1989a): *Crisi del vino e crisi delle ville che non sono affatto la stessa cosa* (p. 117, n. 29: 'Wine crisis and villa crisis are definitely not the same thing'). Yet, Carandini mixes arguments from field archaeology and amphora archaeology (pp. 115, 116). It is, in fact, difficult to see how a crisis in wine-growing could not have affected wine-growing estates; and any conversion to pig-raising, as at Settefinestre, would not have been undertaken unless there had been irresistible forces at work. The same difficulty with chronology can still be seen in the article by Vera (1995: 196). See Giardina (1997: 239–40).

absolute quantities and take no account of demographic evolution; other containers that were used simultaneously, such as skins over short distances, bulk loading in ships, and casks (from a date on which there is no agreement), should also be taken into account. As for evidence from the villa sites, it too can be questioned: very few of the sites have been properly excavated; dating of them via the surveys is usually based on examination of surface pottery remains, which give no indication of possible changes in the uses to which a habitation was put; and the site explorations are often carried out on areas of ground that are too small to have any claim to being representative.¹⁸ In addition, we need a chronological study of villas, to bring together the great quantity of scattered evidence and provide figures and accurate references as a reliable basis for the percentages. However, experience has shown that such reservations are largely ignored, since they would call into question the historical narrative that some wish to draw out of the archaeological findings.

If we set these reservations aside for the most part, or for the moment, we still need to devise a way of comparative analysis of the two sources of data, instead of bundling together things that do not quite fit or just baldly noting that there is this lack of fit. We might make a start by taking the most reliable of the evidence provided by the amphorae and examining it in the light of observations from the field surveys, at least on the Tyrrhenian side of central Italy, the region that has been most intensely surveyed.

The Late Republic

The huge numbers of Republican amphora sherds in Gaul originating from the Tyrrhenian side of Italy (Greco-Italics and Dr. 1s) have long been known and abundantly discussed: hundreds of thousands, or even millions, of amphorae retrieved from hundreds or thousands of sites. Matthieu Poux, in a magisterial survey, has recently undertaken a re-evaluation of these remains, not just waxing lyrical over the sheer amount of them, but examining almost microscopically the circumstances of their burial and distribution. His conclusion is that they give evidence of ritual and ceremonial use of wine by people assembled for civic, warlike, and religious purposes, when festive euergetism was combined with rites entailing 'sacrifices of amphorae and extravagant drink-offerings': 'the archaeological landscape of Gaul in the second and first centuries BC is dominated by the remains of such ceremonies, both large-scale and small-scale, at which thousands of litres of imported wine were consumed.'¹⁹ The wine imported was, of course, supplied by Roman traders to the leaders of the peoples of Gaul, the nobles and druids.

¹⁸ All this has been known for some time; see, e.g., comments in Panella (1983); Millet (1992).

¹⁹ Poux (2004a: 393).

The chronology of this 'Wine Age' (as Poux puts it) is nowadays quite reliably established. Greco-Italic amphorae made their appearance in southern Gaul in the late third century BC. By the middle years of the second century, they are beginning to turn up in central Gaul and northern Gaul, sometimes in the most unexpected places, like the 300 of them at Paule in the heart of Brittany, dating for the most part from the third quarter of the second century. By the end of that same century, the numbers become spectacular. However, this rate of importation did not last long: by the middle of the first century, there had been a sharp decline, which some scholars argue had begun even before the onset of the Gallic Wars.²⁰ Various hypotheses have been advanced to explain why it all came to an end; but the one that Poux prefers is that Rome had forbidden such gatherings as potentially seditious.

Within this frame of reference, recent findings point up, at least in central Gaul,²¹ the important role played at the core of this period by amphorae from central Etruria made in the workshops at *Cosa* and *Albinia*, on either side of the Orbetello Peninsula. In the last years of the second century or the early first century, large numbers of amphorae from these workshops began to be delivered to the Aedui and the Arverni, whose imports had hitherto derived from diverse sources, one of the most important of which was Campania. Such amphorae from central Etruria came greatly to outnumber all others. This situation obtained for half a century; but in the final years of imports of wine from Italy, diversity once more became the rule.²²

The end of the great market created by demand from Gaul, in all its cultural specificity, thus came about before the end of the Republic. Afterwards, there were still Italian amphorae in Gaul, but those found are nowhere nearly as abundant as those just discussed. So wine exports from the Tyrrhenian coast, particularly those from central Etruria, but also from southern Latium and Campania, had been drastically reduced before the start of the Empire. Elsewhere, when large groupings of Italian wine amphorae dating from the time of Augustus are discovered, as at Carthage or recently at Pola, they appear to derive from deliveries to newly settled *coloni*. Until they could establish their own vineyards, they had their wine brought in from the mainland. This, however, could not last very long.

The triumvirate and the reign of Augustus are not usually seen as a period of crisis for villas in Italy run by slave labour. It is, however, worthwhile examining what has been gleaned about that period by the authors of the most thorough field surveys.

²⁰ Desbat (1998); Poux (2004a: 196–9).

²¹ The situation was different along the Aude–Garonne line, where amphorae from Campania seem always to have been the most abundant.

²² Olmer (1998); Olmer and Maza (2004). I received information on the Arverni in a personal communication from Matthew Loughton; I am grateful to him for his permission to quote from this before the publication of his *The Arverni and Roman Wine* (2014).

The villas in the *Ager Cosanus* of central Etruria were built between the late second century and 40 BC. One of them, at Settefinestre, has become widely known through a particularly thorough excavation, the findings of which have been published in their entirety; and its vicissitudes have been much canvassed in the discussion of the villa system and the slave-based mode of production.²³ It was one of the latest to be built in that region, dating from about 40 BC.²⁴ Unlike those established earlier, it did not benefit from the great exports to Gaul; nor is its existence related to trade with the provinces. Its construction is indicative of a changed focus for trade, unless it was the outcome of a misconceived commercial strategy, an archaism that was quickly rectified by its production being redirected to other markets, for it went on producing wine until the time of Trajan. As a rule, field surveys in other regions have also shown that most of the productive villas in central Tyrrhenian Italy were established between the middle of the second century BC and the end of the Republic. The inception of the villa system was thus in fact contemporaneous with the time of the great exports, though most of the villas long outlived that period.

There were, however, some exceptions, as in the territory of Itri, between Fundi and Formiae, though a little farther inland, where many villas were short-lived and disappeared before the Empire.²⁵ In the *Ager Cosanus*, about the time when the Settefinestre villa was being built, small properties were by and large disappearing or had all but disappeared. In that connection, the authors of surveys make apt mention of a late Republican crisis.²⁶ There may be some point in quoting here a comment by Jean-Pierre Vallat: 'A slave villa such as Settefinestre might concentrate on oil, wine and polyculture, while small farms might prefer specialized production of valuable oil or wine or other market crops.'²⁷

The years from 50 to 30 BC saw a radical change in the types of wine amphorae used in Italy. Along the Tyrrhenian coast, Dr. 1 amphorae were replaced by Dr. 2-4s, imitations of amphorae from the island of Cos. Paul Arthur has noted a simultaneous shift of amphora workshops in Campania, in the Falernian territory. Those where the Greco-Italics and Dr. 1 amphorae were produced were situated along the coast south of *Sinuessa*. Those producing the Dr. 2-4 amphorae were farther inland, actually within the Falernian wine-growing area. Arthur suggests that this shift may indicate the setting-up of the workshops on the estates themselves. A comparable development could have taken place on the *Liris* and in southern Etruria. The centres where wine was

²³ Carandini (1985).

²⁴ Carandini (1985: i. 101; ii. 9); Attolini et al. (1991: esp. 149).

²⁵ De' Spagnolis (1983).

²⁶ Celuzza and Regoli (1982: 60): *La piccola proprietà non sembra risollevarsi affatto dalla crisi tardo-repubblicana* ('Smallholdings do not appear to have recovered at all from the late Republican crisis').

²⁷ Vallat (1991: esp. 14).

decanted into amphorae were no longer linked to the sea; nor were they still in the hands of traders.²⁸ Arthur states also that a good number of the winepress counterweights that he has observed come from sites abandoned before the start of the Empire. More exactly, the first sites abandoned at that time were at high elevations and not easily accessible, on Monte Massico, for instance.²⁹ In other areas, amphora workshops disappeared along with their Dr. 1 amphorae: at Dugenta, on the Volturno, a good 50 kilometres from its mouth, hence well inland; and even on the coast at *Astura* in Latium and *Gravisca* in southern Etruria.

At the same period, going now to the other side of Italy, what disappeared was the olive-growing in Apulia-Calabria, with its amphorae. Despite Daniele Manacorda's different interpretation (that a deliberate choice was made to convert to raising livestock),³⁰ in this case it seems likely that the disappearance was a result of real competition, given that so-called Brundisium amphorae, before they disappeared, coexisted for a time with amphorae from Istria and Baetica, production and export of which were going to grow considerably.

So it can be seen that the data from exported amphorae do coincide with some of the consistent findings from field surveys, which deserve to be seen as more relevant than is generally accepted. However, the end of the great exports brought about first and foremost the inescapable collapse of a whole commercial system: the transporting of wine organized by traders, and the exchanging of it mainly for slaves. These traders probably bought in the first place from the large villas; but they could also have drawn on wine from smaller land-owners whose product was thus sure of being marketed. At a time when wine was a favoured currency with the peoples on the periphery of the Roman world and the terms of trade particularly unequal, even marginal areas were able to profit from long-distance marketing, which later on was no longer the case. It is likely that coastal areas of central Italy planted with vines reached their greatest extent shortly before the middle of the first century BC, a position that they never completely recovered.

A counter-example can be seen in recent work done in the territories of Pisa and Volterra. Many amphora workshops have been identified also in this northern region of Etruria, some of which date back to the third century BC, and produced Greco-Italics and Dr. 1s. Judging by research until now, however, very few of these amphorae appear to have ended up in any of the sites north of the Mediterranean.³¹ What is notable, though, is that, unlike

²⁸ Arthur (1987; 1991: 75, 85).

²⁹ Arthur (1991: 73, 87). The opinion of Vallat, in Chouquer et al. (1987: 361), is markedly different from that of Arthur, in that he maintains there was continuity of villas till the late Empire.

³⁰ Manacorda (1995), which gives earlier bibliography. [Manacorda (2001: 395), on the other hand, does not totally rule out competition from other regions.]

³¹ Thierrin-Michael et al. (2004).

workshops in the *Ager Falernus*, all these ones that were producing Greco-Italics and Dr. 1s also produced Dr. 2–4 amphorae and even later models, right up to the fourth and fifth centuries AD. Unlike the *Ager Cosanus*, several workshops began their production with the Dr. 2–4s. Villas were built during and after the reign of Augustus, and there was a great increase in the rural population in the first century AD.³²

So there was a marked difference between two areas that are only about 100 kilometres apart. This should warn against generalizing about the whole of Italy from conclusions based on evidence from one or two regions. It also shows that the development of villas and the growing of commercial crops could occur quite independently of provincial markets or while making very little use of them. In any case, the idea that all development of wine- and olive-growing in Italy during the Republic was linked to overseas trade is historically implausible. The only region where any such specialization might have happened was *Cosa*. In addition, with the passing of time, the economic preponderance of Rome and its consumption became overwhelming.³³ It was far and away the largest market on the face of the planet.

With the collapse of the organized trade with Gaul, the most powerful landowners had to rethink their commercial interests accordingly. Many villas maintained their production, even though the considerable profits that their owners had earned from the wine trade diminished and they had to adopt a more careful policy. This can perhaps be seen in the concentration of property in the first and second centuries AD and in the disappearance, at Settefinestre and elsewhere, of some of the luxurious *partes urbanae* of the villas. Owners of smaller holdings, with their lesser influence, depending on traders rather than dominating them, encountered more difficulties.

The First and Second Centuries AD

The most unambiguous data about use of amphorae in trade during the Empire derive from counts of them made in the large centres of consumption. In 1981, Clementina Panella famously published a graph showing amphorae found in sufficient numbers at Ostia, (a) for the time of Augustus, in a deposit that was used for the drainage of a marshy area close to the town, and (b) for later periods, in the stratigraphy of the excavations at the Baths of the Swimmer (Fig. 19.1).³⁴

³² Pasquinucci and Menchelli (1999, 2002).

³³ The arguments advanced by Morley (1996: 10–11), are unconvincing. As are Vera's (1995: 197, n. 35).

³⁴ Panella (1989: 68–9, 76–7).

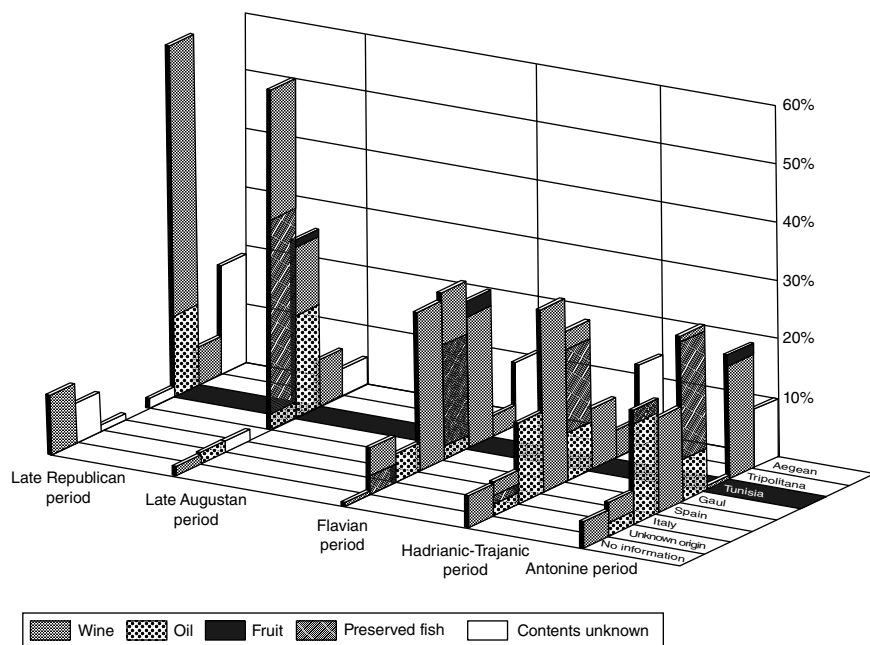


Fig. 19.1. Ostia, all amphorae. (Panella 1981)

The percentage of Italian wine amphorae relative to others declined by about 50 per cent between the Republic and the time of Augustus; and it continued to go down at much the same rate until the end of the Antonines, while wines from Hispania and Gaul were on the rise. Ultimately, the Italian product became more or less nonexistent. Despite Panella's qualifying statements for this later period included in an *Addendum*, which was probably not widely read, her graph has often been reproduced and has long been deemed authoritative. Consumption in Ostia, the port of Rome, seemed to be so representative that it could serve as a yardstick for how the Italian product fared faced with those from the provinces. Panella herself made alterations to some of the Ostia figures; but the main thing was that she introduced results from additional counting based on the material from excavations in Rome (Fig. 19.2).³⁵

It became obvious that there could be significant variation in figures from the two different places, in relation to pottery as well as to amphorae.³⁶ For example, amphorae conveyed down the Tiber in the first and second centuries

³⁵ Panella (1989, 1992); Panella and Tchernia (1994).

³⁶ See especially Pavolini (1996) [and Rizzo (2012)].

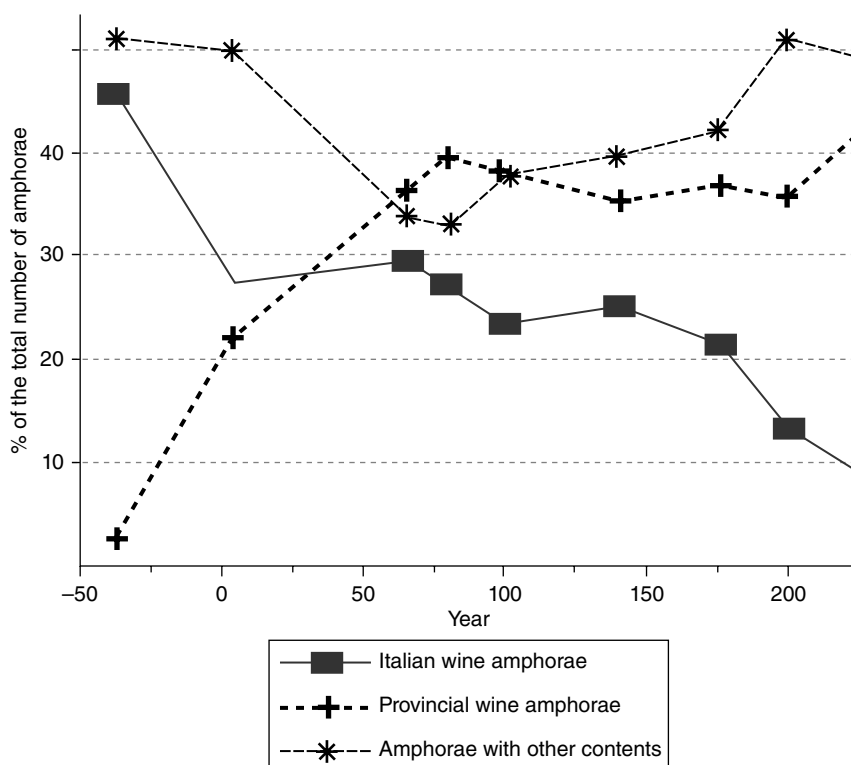


Fig. 19.2. Rome or Ostia; all amphorae, divided into provincial or Italian wine amphorae and amphorae with other contents. (Panella and Tchernia 1994)

are much more numerous in Rome than at Ostia, whereas those from Gaul, and even from the Vesuvius area, are more plentiful at Ostia. Italian sigillata found in Rome derives almost exclusively from Arezzo and the lower valley of the Tiber,³⁷ but in Ostia at least as much of it comes from the workshops of Pisa. The markets of the city of Rome and its port were not a single entity; the 35-kilometre stretch of river, though busy with ships and well adapted to handling them, constituted in some ways a real divide, for both upstream and downstream traffic. This should be seen in the context of other much farther-reaching aspects of coastal distribution: Arretine pottery and, later, African pottery were familiar throughout the Mediterranean seaboard, but the former is found inland only in Gaul and along the Danube, and the latter only in Italy and Greece. Away from the sea, the market was fragmented by difficulties with transport.

³⁷ Rizzo (1998); Olcese (2003).

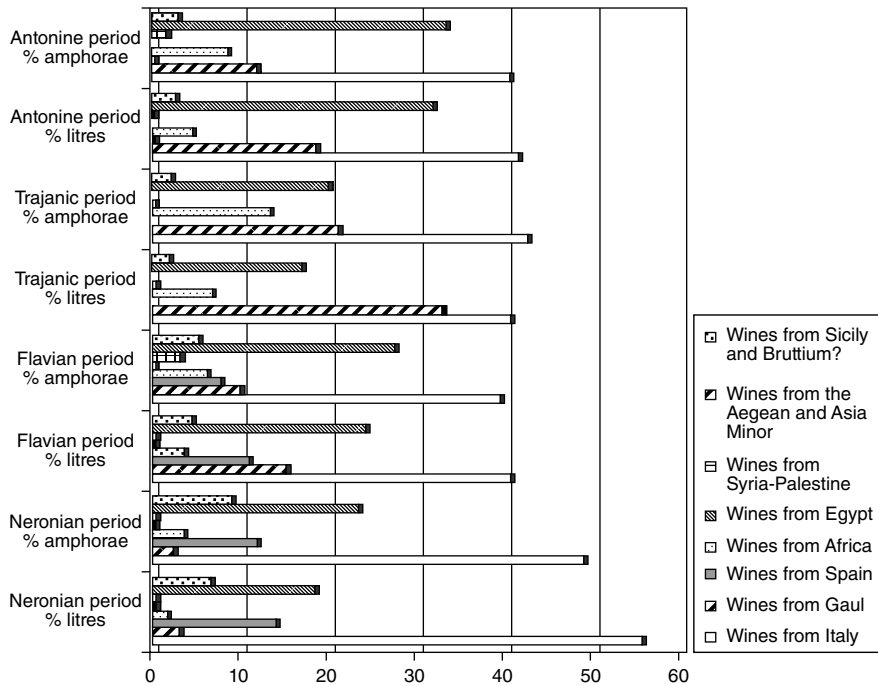


Fig. 19.3. Rome; wine amphorae only. (Rizzo 2003)

There is no new evidence on amphorae from the Republican and Augustan periods; nor is there any reason to abandon the percentages that quantify the collapse between the first half of the first century BC and the time of Augustus: Italian wine amphorae drop from 95 per cent to a mere 55 per cent. This is not surprising at a time when produce that had not existed before was beginning to appear, in particular from Hispania. It is difficult to state anything with certainty about the decline (or lack of it) in absolute terms represented by this percentage decrease during a period when there was definitely large growth in the population of Rome.

For the following periods, we now have a recent book with figures deriving from several excavations of Rome from the period between Nero and Antoninus (see Fig. 19.3).³⁸ There is very little difference between the figures for Ostia under Augustus and those from Rome under Nero. But there is a sharp decline in the Italian proportion of these figures between Nero and the Flavian period (down from 55 per cent to about 40 per cent). Here, however, we must bear in mind the destruction of the wine-growing areas of Pompeii and Vesuvius in AD 79, for the samples used derive almost entirely from sites

³⁸ Rizzo (2003).

dating from later than AD 80. The sudden burying of such important vineyards inevitably had repercussions on trade and plantings of vines. Nor should we forget the effect of the earthquake in the same area in AD 62 and those that followed it, which, though they did not destroy the vineyards, did affect the population and the villas and disrupted wine production for at least a few years.³⁹

In subsequent years, the proportions of Italian and provincial amphorae remain totally stable until the time of Antoninus. In the present state of research, tables of percentages for Italian and provincial wine amphorae during the Empire up to AD 160 show no clear point of divergence, except the understandable one caused by the eruption in 79. A statement by Andrea Giardina, in the 1997 article I have cited as being authoritative, is not supported by the recent evidence: 'Between the time of Augustus and the Antonines, the descending trajectory of wine production from Italian villas using slave labour reached its nadir.'⁴⁰ This could be true only if vineyards not relying on slave labour had increased their share of production.

The overall continuity of consumption of Italian wine in Rome does not mean Italian wine-growing remained uniformly stable. In fact, it masks a profound change. By the end of Nero's reign, the amphorae that Rizzo says were from 'the middle and lower valley of the Tiber'⁴¹ represented a substantial proportion of the wine amphorae (9.9 per cent, or, in terms of volume of contents, 7 per cent), while still coming nowhere near the proportion from Central Tyrrhenian Italy (36.66 per cent, which, in terms of volume of contents, represents 45.5 per cent). By the end of the Flavian period, they occupied the top spot, having jumped to 26 per cent (in terms of volume of contents, 21 per cent), whereas amphorae from the Tyrrhenian coast had dropped to 13.3 per cent (in terms of volume of contents, 19 per cent). The eruption of Vesuvius and the need to replace the destroyed vineyards had played a role in this increase; but the first signs of it predated them. The most evident competition experienced by the wine-growing areas of the Tyrrhenian coast was not from the provinces, but from inland regions of Italy itself. There, the numbers of villas did not decrease in the first and second centuries. In Umbria, it was in the first and second centuries that they actually reached their highest levels. They also increased in the territory of *Volaterrae* from the start of the common era; and, from then on, few villas were abandoned. In such places, there is no evidence at all of a second-century crisis.⁴²

In the *Cosa* area, however, things were very different. Between the middle of the first and the end of the second centuries, Andrea Carandini reports villas

³⁹ See the example of the villa at Scafati in De' Spagnolis (2002: 150–1).

⁴⁰ Giardina (1997: 244).

⁴¹ They were also produced close to the coasts of northern Etruria: Pasquinucci and Menchelli (2002).

⁴² Lafon (1994: esp. 220); Pasquinucci and Menchelli (2002).

being abandoned, which, depending on the type of site and where it was located, could vary, roughly, between a third of them and considerably more than a half, particularly wine-producing villas.⁴³ It would be helpful if we could have a more detailed chronology. As for scholars who have worked on field surveys, they tell us that the truly dramatic decline occurred at the end of the second century.⁴⁴

In the other regions, the picture seems no less complex. Xavier Lafon has noted no real decline on the coast of southern Latium.⁴⁵ In the Falernian territory, on the other hand, 70 per cent of sites appear to have been abandoned by the third century AD. Here, too, it is not possible to take a very close look at the chronology of the decline; but Paul Arthur believes that a proportion of the amphora workshops, which, as we have seen, were set up in inland areas at the end of the first century BC, had been abandoned by the turn of the second century AD. Those that remained, however, did go on exporting amphorae into the third century. These were massive amphorae, developed from the Dr. 2–4 type, and were used not just for Falernian wines, but also for wines from Minturnae, the Bay of Naples, Cales, and Surrentum—that is, in particular the great wines of Campania. These amphorae were distributed rather thinly, but in all directions and to great distances, which are the characteristics of valuable wines, affordable for only a privileged elite but extremely profitable. Beyond the borders of Campania, they have been identified during the second century and the first quarter of the third at Rome and Ostia, but also at various sites in Britain, as well as at Augst, Mâcon, Lyons, Saint-Romain-en-Gal, in the Les Embiez wreck near Toulon, and from the stamps on others at Fondi, *Tibur*, Florence, Tarragona, Carthage, Corinth, and Salamis in Cyprus. In Lyons, they were more numerous than were the Dr. 2–4 amphorae at the end of the first century.⁴⁶

The picture we get from field surveys is thus full of contrasts, at both the local and the general level. The only region where there is consistency between the evidence from the amphorae found at Rome and from the field surveys is Umbria. Andrea Carandini states that, between Etruria and Calabria, 40 per cent of villas disappeared before the end of the second century; by contrast, Xavier Lafon, speaking of aristocratic residences (Andrea Carandini's 'central villas') maintains that 'their total numbers were not in decline during the period under consideration and there were whole areas where many were still being built'.⁴⁷ What does seem clear is that field surveys focusing on that

⁴³ Carandini (1994: esp. 170–1).

⁴⁴ Attolini et al. (1991): 'The really dramatic contraction occurs at the end of the second century AD, and it is then that the villas most closely associated with intensive wine production tend to be abandoned.'

⁴⁵ Lafon (2001: 259–61).

⁴⁶ Desbat and Savay-Guerraz (1990); Arthur and Williams (1992).

⁴⁷ Carandini (1989a); Lafon (1994: abstract).

period suffer from a lack of chronological precision. Behind terminology that is often used, such as 'gradual disappearance' of villas or production 'that tends to decrease', there lies a dearth of data. Such language assumes there was a regular slope continuing downwards for nearly two centuries, not the most historically plausible of hypotheses. What is at stake here, however, is something of real moment, for, if we delay the decline in amphora production and the decrease in the numbers of villas till the end of the second century, then two new elements come into play. As regards the amphorae, there is the indubitable spread of casks, which had been in use for a long time on the Adriatic coast for transporting wine to the *limes* on the Danube⁴⁸ and which, at least from the early third century, had extended even farther than that. Regarding settlement, there was the Antonine Plague and the demographic regression that must have ensued, at least in some places. Elio Lo Cascio has been stressing this for some time, and rightly so;⁴⁹ and, during the last period of the villa at Settefinestre, excavations have actually uncovered walled-up slaves' quarters, a fact that is seen as symptomatic of the epidemic.⁵⁰ For all these reasons, in the first and second centuries AD, it is difficult to assess not just whether there is any consistency between the quantification of amphorae and the field surveys, but also the hypothesis that there was competition from the provinces. The only disjunction that clearly shows up before the third century AD is the one dating from the last years of the Republic and the end of the reign of Augustus.

If, however, one wished to support the hypothesis that there was competition from the provinces in the first and second centuries AD, there can be no doubt that the amphorae from Gaul would provide good evidence. Their numbers in Rome follow a curve that is almost parallel with that of the amphorae from the Tiber valley. Between Nero and the Flavians, the percentage of them relative to the total numbers of wine amphorae increases from 2.3 per cent (in terms of volume of their contents, 3 per cent) to 10 per cent (in terms of volume of contents, 14.4 per cent); and after that time it goes on growing.⁵¹ Although the brief and very high peak under Trajan raises problems of interpretation that make it difficult to use these figures, let us leave aside two matters (the other types of containers; and the uneven effects wrought by the change in the uses that slaves were put to) and squarely face this idea that there existed a competitive system. In so doing, our first observation would be that the increase of amphorae from

⁴⁸ Panella and Tchernia (1994: 159); Zaccaria (1995: esp. 58).

⁴⁹ See, in particular, Lo Cascio (1991b: 707–16). Since then, discussion has continued and been fleshed out, though even authors who express doubts about the bases of evaluation do not dispute that the epidemic had its importance. See most recently Bruun (2003) with bibliography and Lo Cascio (2012).

⁵⁰ Carandini (1985: i. 183–4).

⁵¹ 32.8% in terms of volume under Trajan; 18.8% under Antoninus.

Gaul was at the expense of amphorae from Hispania *Tarraconensis* and *Baetica*, which disappeared at that time. The second would be that the competition in Italy happened very unevenly. There would appear to have been only very partial communication between two different worlds: on the one hand, the hinterland and the Tiber valley; on the other, the coastal strips of the western Mediterranean. During the Empire, areas close to Rome (which needed no amphorae to transport their produce to the city), the Sabine region, inland Etruria, and parts of Umbria closer to the Tiber all enjoyed privileged access to the Rome wine market. By boat down the Tiber seems to have been a safer and more advantageous way of supplying the city than by sailing along the coast then up-river from Ostia. On the other hand, the coastal areas belonged to a system that was more open and more complex. What we can say, though, going on current scholarship, is that competition from wine from Gaul would have harmed northern Campania and ruined the wine-growers in central Etruria, while sparing those in northern Etruria. Lastly, when the crisis in Italy is believed to have been at its worst, the end of the second century, there is even clearer evidence of another crisis in Gallia *Narbonensis*, which Jean-Pierre Brun interprets as having been caused by demographic forces.⁵² We shall have a clearer idea of this once the amphorae now lumped together as 'Tyrrhenian' have been assigned to particular regions and many more villas in Italy have been excavated and dated. Things will become clearer, too, if we broaden the scope of our enquiry to include what was happening all over the western Mediterranean.

The concept of 'competition' is a simple one, familiar to everyone these days more than ever, and easy to apply to a multitude of situations. However, it does strongly imply contention; an idea of rivalry is inseparable from it. There was economic rivalry in Antiquity, an assumption I have used in the case of olive oil from Apulia-Calabria. One is also tempted to argue that, about AD 150, competition from African pottery (brought in as complementary cargo with the grain, oil, and wine, hence benefiting from minimal freight costs) eventually got the better of producers of Italian *sigillata* after more than half a century of coexistence. But to speak of 'competition' whenever archaeological evidence shows that one product was replaced by another is simplistic, an idea that often cannot withstand close scrutiny. When the numbers of Italian amphorae collapse in Gaul, others start to turn up from *Tarraconensis*, but many fewer of them. There is, however, a slight time lapse between the two events, as has been well shown by recent scholarship. In south-westerly parts of Gaul, Frédéric Berthault, a specialist in that area, makes the point: 'It is not that Spanish wine wins market share away from Italian wine. What happened was

⁵² Brun (2005: 71–4).

that Roman *negotiatores* just abandoned the market of south-west Gaul, leaving a vacuum which was only gradually filled by wine from Laeetania'.⁵³ Archer Martin, after a study of the Arretine ceramics in Rome and Ostia, confirmed what Christian Goudineau stated in 1980: by the time competition from the workshops of the Ruteni in south-west France came to be a genuine threat, the Italian ones and their branches in Lyons had already closed down; the workshops of the Ruteni 'did not conquer the market in the various regions of Gaul and Germania after a fierce struggle, but simply because it was there and available'.⁵⁴ Javier Nieto, working on the distribution of ceramics from La Graufesenque, observes that it began to decline sharply during the reign of Vespasian and that African Red Slip Ware did not appear in substantial numbers until later. Thus: 'There was no competition to win the market; African Red Slip merely took over the space vacated by sigillata from southern Gaul'.⁵⁵ These three findings, quite independently of each other, reflect situations that were just as representative as those in which there was competition.

Competition develops within an economic situation dominated by supply; and supply-side economics is the point of view mostly favoured by historians of Antiquity. In so doing, however, they tend not to pay much attention to transport difficulties, which can make for great disparities among different regions, or to the problems inherent in the circulation of information and the practicalities of organized trade. The model devised by Keith Hopkins, for instance, explains that the only way in which the provinces where the state incurred little expenditure (because no troops were stationed there) could pay their taxes was by earning a surplus through exporting their produce, which meant they were obliged to engage in trade with central parts of the Empire, especially the city of Rome itself, which was the other area of state expenditure. And this explains 'competition from the provinces'. In the abstract, this is a perfectly adequate model. But it does not enlighten us on how producers in the provinces managed to find markets for their produce or how they organized the selling of it and its delivery via routes that were extremely diverse, long, and at times difficult. When a vacuum is created, when it becomes clear that needs are not being met, traders notice this and organize transport. But deciding to declare commercial war on a well-established product is a totally different thing. And anyone relying on such a hypothesis should do so with the greatest caution.

[My complaint about the lack of a work of synthesis on the villas and their chronology has now been satisfied by Annalisa Marzano's book (2007), as far as

⁵³ Berthault (1998: esp. 451); Poux (2004a: 199).

⁵⁴ Goudineau (1980: esp. 128); Martin (1992).

⁵⁵ Nieto Prieto (1993: esp. 82).

Latium, Etruria, and Umbria are concerned.⁵⁶ Broadly speaking, the period when villas were most numerous was clearly the first century AD. The evidence presented, therefore, does not support my idea, outlined in this chapter, that wine-growing areas, at least in coastal parts, were at their greatest extent near the end of the first half of the first century BC. Marzano does observe, however, that the number of villas that disappear in the first century AD (125) is exactly the same as the number of villas that were being built. This, she says, could be seen as evidence that abandonment of villas had begun. For this reason she briefly broaches the idea of competition from the provinces and the link it would imply between imports and the disappearance of some of the villas. She does not accept this idea, though, believing that there would have been, of necessity, a delay 'before the alteration in the economic situation could have had an impact on the economy of the villas and made it more and more difficult for landowners to find market outlets for their produce'.⁵⁷

Here I part company with Marzano, first because the chronology I have adopted for the decrease in exports from Italy has an earlier starting date, and secondly because I feel that the latency period could not have been very long, that even one or two decades would be plenty. Marzano goes on to show, from the evidence of the most thoroughly studied villas, that it is not possible to prove that villas were systematically abandoned, either in the first and second centuries or even later. In each case, there are individual circumstances that must be taken into account.

I was briefly tempted to explain the simultaneity of the two phenomena, abandonment of villas and building of villas, in the first century AD by a shift in focus among Italian producers: vineyards planted for the export trade might have got into difficulty, while others more focused on supplying Rome could have prospered.⁵⁸ But examination of the detailed data presented did not enable me to identify with a sufficient degree of probability any micro-regional differences to support such an interpretation.

Marzano does, however, give lists and graphs that, on two other matters, confirm observations that I stated earlier. There is a very sharp contrast between the chronology of villa-building in Umbria and in the other two regions taken together. In Umbria, 61 per cent of villas were built in the first century AD and only 26 per cent in the first century BC, whereas in Latium and Etruria, much of the building took place in the first century BC (42 per cent and 47 per cent respectively).⁵⁹ This firmly corroborates the evidence from the amphorae: that, in the first century AD, there was great expansion in wine-growing in the Tiber

⁵⁶ The villas are classified according to modern provinces. The catalogue gives 384 of them in Latium, 50 in Tuscany, and 28 in Umbria. The only ones considered are those on which something, however minimal, has already been published.

⁵⁷ Marzano (2007: 200–1).

⁵⁸ On black-grape vines grown for export, see Ch. 18.

⁵⁹ Marzano (2007: 773, 782, 791).

valley, a convenient source of supply for Rome. Marzano's map 23 (p. 710), which includes sites too meagrely documented to figure in her catalogue, shows an amazing density of them in the south of the region, in the vicinity of Narni and Otricoli. One has to wonder, though, whether a good proportion of such villas did not put much of their effort into producing bricks and tiles for Rome, rather than into agriculture and wine-making.

Marzano's information on villas in Etruria is also consistent with well-documented findings from work done in northern Etruria. Four of the five datable villas lying north of the Cecina, in the Volterra and Pisa regions, were built in the first century AD, and only one in the first century BC. Near Populonia, four of them appear to be datable: two from the late Republic and two from the first century AD. South of the Ombrone, on the other hand, around Cosa and the Albegna valley, nine villas would appear to have been established in the second century BC or possibly earlier, at the turn of the third and second centuries, and five in the first century BC. Only one would appear to date from the time of Augustus; and there are none from any later time.

In Latium, the period with most villa-building is the first century BC (42 per cent of them, as against 23 per cent in the second century BC and 29 per cent in the first century AD). Such figures bring to mind the 'dynamism index' that J.-P. Vallat devised for Campania, where numbers were particularly high in the third century BC and the second half of the second, only to collapse between 100 BC and the start of the reign of Augustus.⁶⁰ In Umbria and northern Etruria, the peaks would appear to occur in the first century AD. We can say with certainty that production in the various regions of Tyrrhenian Italy do not share a common curve. Nor can we attribute their differing evolutions to a single cause.]

⁶⁰ Vallat (2001: 588).

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Index of Sources

Literary

Acts of the Apostles

XXVII, 1–12: 274

XXVIII, 1–14: 274

Aelian

De natura animalium

15, 8: 235

Aelius Aristides

XXVI, 11: 6

XXVI, 12–13: 6

Agatharchides

103 (GGM I, p. 191): 237

Anthologia graeca

XIV, 72: 20–1

Apicius

I, 4: 86

Apocalypse

18, 12–13: 7

18, 23: 6

Appian

VI (*Iber.*), 85, 367: 99

VIII (*Lib.*), 86–9: 4, 171

Aristotle

Politica

II, 11, 8 and 10: 22

V, 10 (1316b): 164

VI, 56, 1–5: 171

VII, 4 (1327a): 4

VII, 6, 1: 3

VII, 6, 2: 5

Arrian

Anabasis

VI, 21: 232

Athenaeus

IV, 152c: 285

IV, 154d–e: 284

IV, 158d: 267

Aulus Gellius

XI, 14, 2: 75

XV, 4: 166

Caesar

De bello ciuili

III, 96: 223

Cassius Dio

XLVI, 1, 28: 166

LI, 21, 5: 185

LIII, 26, 4: 258

LIV, 20, 4: 258

LVI, 27, 3: 212

LVII, 14: 204

LVIII, 21, 1–5: 247

LVIII, 21, 4–5: 174–82

LIX, 2, 6: 183

LIX, 17, 2: 216

LIX, 18, 1: 216

LX, 11: 208, 216–18

Cato

De agricultura

Praef.: 23, 41, 165

1: 12

1, 3: 146

11: 155

11, 1: 155

56: 192

57: 196

147–8: 143

154: 142

Cicero

Brutus

197: 131

De lege agraria

II, 95: 3, 171

De officiis

I, 92: 64

I, 150–1: 22, 41, 125, 165

II, 55: 41

De republica

II, 5–9: 3

II, 5: 215

II, 10: 5, 203, 215

Epistulae ad Atticum

I, 8, 2: 16

I, 9, 2: 16

X, 11: 18

XII, 2: 262

XII, 32: 169

XIV, 9, 1: 169

XV, 17, 1: 169

XVI, 4, 4: 17

Epistulae ad familiares

II, 14: 213

V, 6, 3: 182

X, 18, 3: 166

Epistulae ad Quintum fratrem

II, 8, 2: 219

Paradoxa stoicorum

VI, 43: 168

VI, 46: 36, 39–40, 165

In Pisonem

67: 148

Pro Fonteio

11: 289

Pro Rabirio Postumo

XIV, 38: 39

Tusculanae disputationes

II, 122–3: 163

III, 49: 219

III, 117: 219

III, 171: 219

III, 172: 219

III, 176: 219

III, 179: 219

IV, 19: 18

IV, 150: 18

V, 44: 18

V, 44–6: 157–9

V, 46: 146

V, 59: 18

V, 73–4: 43

V, 86: 169

V, 136: 18

V, 146: 7, 46

V, 154: 31, 46, 138

V, 156: 43

Columella**De re rustica**I, *Praef.* 7–10: 134I, *Praef.* 14: 161I, *Praef.* 20: 5, 214

I, 2, 3: 12, 146

II, 6, 3: 267

III, 20, 4–5: 293

V, 8, 5: 85

XII, 52, 14: 14–15

De uiris illustribus

III, 72, 1: 167

Dio ChrysostomVII (*Euboicus*), 104: 66**Diodorus Siculus**

V, 13: 15

V, 23, 6: 120

Dionysius of Halicarnassus**Antiquitates Romanae**

III, 44: 205, 215

Ennius**Annalium fragmenta**

II, 94–5: 169

Epitome de Caesaribus

I, 6: 188, 193–4

4, 3: 216

Eusebius**Chronicon** (St. Jerome's translation) AD 50

(ed. Fotheringham p. 263): 213

Florus**Epitomae**

I, 1, 4: 6

I, 4, 2: 6

Frontinus**Stratagemata**

4, 3, 1: 100

Fronto**Epistulae de eloquentia**

I, 1 (Naber 115): 146, 273

Galen (ed. Kühn)

VI, 196: 85–6

VI, 220: 85

VI, 287: 85

X, 362–4: 216

X, 392: 85

X, 577: 85

X, 790–1: 86

X, 822: 85–6

X, 834: 294

XI, 869: 85–6

XI, 871: 86

XI, 872: 85

XIV, 24: 6

Gregory of Nazianzus**Orationes**

43, 34: 89–90

Horace**Carmina**

I, 3, 21–4: 3

Epistulae

I, 1, 45: 46, 126

John Chrysostom**First homily on Lazarus**

PG 48, 966: 32, 136

Josephus**Antiquitates Iudaicae**

XVIII, 159–60: 49

XIX, 1: 216

Bellum Iudaicum

II, 383: 189, 214

II, 386: 188–9, 214

Juvenal

XII, 75 (scholia): 208

Livy

I, 33, 9: 206

III, 26, 9–10: 4

VII, 31: 215

XXI, 63, 3–4: 150–73

XXII, 25, 18–26, 1: 166

XXIII, 3–4: 163

XXIII, 21, 5: 207

XXIII, 38, 13: 207

XXIII, 48, 12: 258

XXV, 3: 207

XXXII, 18, 3: 219

XXXIV, 9, 13: 258

XXXVII, 27, 1–3: 100
 XL, 51, 2: 162
Lucan
 I, 318 (scholia): 189–91
 VIII, 172–85: 236
Lucian
Naugium
 23: 272
Macrobius
Saturnalia
 II, 4, 28: 69
Manilius
 IV, 169–70: 6
Martial
 IV, 64, 21: 204
 XII, 63, 1–2: 86
 XIII, 9: 268
Palladius
De re rustica
 II, 6: 293
Pausanias
 X, 32 19: 86
Periplus of the Erythraean Sea
 26: 235
 39, 49, 56: 220–1,
 239
 47: 234
 51: 234–5
 57: 231–4
Petronius
Satyricon
 XXXIX, 8: 33, 38
 XLIII, 6: 253
 LXXVI: 33
Philo
De legatione ad Gaium
 47: 6
Philodemus
De oeconomia
 XXIII (ed. Jensen 1906): 66
Philostratus
Vita Apollonii
 IV, 32: 4, 23
 VII, 16: 204, 216
Plato
Leges
 IV, 704–5: 3
Sophista
 223d: 10
Plautus
Asinaria
 186: 165
Captiui
 129: 168
Mercator
 76–9: 154

Poenulus
 210–11: 171
 286–7: 165
 1140: 168
Rudens
 292: 165
 930–1: 132
 932–3: 18
Truculentus
 416: 165
Pliny the Elder
Naturalis historia
 II, 228: 230–1
 III, 53: 204
 III, 54: 203
 VI, 24: 43
 VI, 26: 238
 VI, 57: 234
 VI, 72: 235
 VI, 84: 239
 VI, 96: 230–1
 VI, 96–9: 231
 VI, 100: 230–1
 VI, 101: 230–1, 238
 VI, 102–3: 42
 VI, 104: 43, 230
 VI, 105–6: 186
 VI, 162: 239
 VII, 56: 69
 VII, 139: 164
 IX, 117: 48
 XI, 240: 6
 XII, 41: 238
 XII, 84: 238
 XIII, 82: 200
 XIII, 89: 97
 XIV, 2: 6
 XIV, 50: 143
 XIV, 52: 5
 XIV, 62: 141
 XV, 8: 86
 XVI, 201: 268
 XVIII, 6. 26–8: 12
 XVIII, 7: 4
 XVIII, 18: 4
 XVIII, 62: 267–9
 XVIII, 63: 214
 XVIII, 66: 214, 267
 XVIII, 81: 268–9
 XVIII, 82: 267
 XVIII, 89: 199–200
 XVIII, 92: 268
 XVIII, 123: 268
 XVIII, 359: 230
 XXIII, 40: 145
 XXXII, 21–3: 243
 XXXIII, 164: 78
 XXXVI, 51: 268

Pliny the Younger*Epistulae*

III, 19: 135, 176–7

III, 19, 8: 182

IV, 6: 82

V, 6: 203

VI, 19: 187

VIII, 2: 143–4

IX, 16: 143

IX, 16, 1: 143

IX, 20: 143

IX, 20, 2: 143

IX, 28, 2: 143

X, 54. 1: 177

X, 104: 34

Panegyricus

XXXI: 216

Plutarch*Vitae parallelae**Caesar*

LVIII, 5: 208

Cato Maior

I, 7: 100

XXI, 5–6: 35

XXXI, 2: 22

Cicero

I, 1–2: 166

Crassus

II, 5–7: 169

II, 8: 67

Marius

XLIV, 2: 148

Pompeius

LXXIII, 3, 6: 47, 223

*Moralia**An seni sit gerenda res publica*

787a: 136

De liberis educandis

7 (4 A–B): 28

Polybius

II, 15: 100

IV, 38, 4: 7, 295

IV, 38, 4–5: 120

VI, 39, 12–14: 99, 192

X, 10, 11: 121

XIV, 7, 2: 99

XXXIV, 9, 8: 121

Procopius*De bello Gothico*

I, 26: 204

Propertius

I, 17, 13ff: 4

II, 7, 26–38: 4

Pseudo-Aethicus*GLM* 83: 204**Ptolemy***Geographia*

I, 7, 6: 235

Tetrabiblos

IV, 2, 174: 134

Quintilian*Institutio oratoria*

II, 21, 18: 208

III, 8, 16: 208

Sallust*Bellum Iugurthinum*

XLIV, 5: 99,

120, 258

De coniuratione Catilinae

II, 7: 133–4

Epistulae ad Caesarem

II, 9, 4: 80

*Scriptores historiae Augustae**Hadrianus*

10, 2: 100

Heliogabalus

27, 7: 198–9

Marcus Aurelius

11, 8: 187

Seuerus

8, 5: 198

23, 2: 189–91, 197–200

Seneca*Ad Heluiam matrem*

X, 5: 4

De beneficiis

IV, 13, 3: 23, 125

De breuitate uitae

XVIII, 5–6: 216

XX, 2: 136

Epistulae ad Lucilium

2, 6: 135, 177

17, 10: 134

36, 5: 32

41, 7: 135, 177

80, 7: 190

87, 6: 135, 177

87, 20–1: 6

88, 22: 41

101, 1–4: 38–9

101, 2: 136

110, 11: 7

114, 26: 149

119, 1: 32, 38, 135

*Quaestiones naturales*IV, *Praef.* 7: 39–40, 134**Strabo**

II, 3, 4: 236

II, 5, 12: 237

III, 2, 5: 261

III, 2, 10: 121

III, 5, 3: 262

IV, 3, 2: 107, 259

- IV, 6, 2: 83
 IV, 6, 12: 120
 V, 1, 8: 120, 295
 V, 2, 10: 203
 V, 3, 1: 85
 V, 3, 5: 207, 210, 215
 V, 3, 7: 203
 V, 4, 6: 267
 XI, 2, 2: 295
 XI, 2, 3: 120
 XI, 11 (516): 234
 XV, 1, 17: 232
 XVII, 1, 13: 237
- Suetonius**
De grammaticis
 XXIII: 147
De uita Caesarum
Augustus
 II, 6: 166
 III, 1: 166
 XLI, 1: 185
 XLI, 2: 177
 LXIX, 2: 69
Caligula
 XIX, 1: 216
 XXXII, 3: 216
 XXXVII, 3: 183
Claudius
 I, 2: 260
 XVIII, 3–4: 211–12
 XIX: 211–12
 XX, 1: 208
 XL: 148
Domitianus
 IX, 6: 26
Nero
 XI, 4: 134
 XLV, 1: 216
Tiberius
 XLVII, 2: 186
 XLVIII, 2: 174–5, 247
Vespasianus
 I, 2: 166
 I, 4: 167
 IV, 6: 167
Vitellius
 II, 1: 166
- Synesius**
Epistolae
 54: 115
- Tacitus**
Annales
 I, 17: 99, 102, 104
 I, 75: 186
 II, 8, 1: 260
 II, 37–8: 186
 II, 48: 186
- II, 62, 3: 99
 III, 40: 184
 III, 53: 239
 III, 54: 5
 III, 54, 7: 214
 IV, 6, 4: 214
 VI, 11: 183
 VI, 13: 195, 214
 VI, 15–17: 247
 VI, 16–17: 174–5
 VI, 17, 1: 179, 183
 VI, 17, 3: 175, 182
 VI, 17, 6: 183
 XII, 43, 2–4: 213–14
 XIII, 50–1: 138
 XIII, 51: 104
 XIV, 53: 39, 135, 177
 XIV, 53, 6: 178
 XIV, 55, 5: 178
 XV, 43: 182
- Germania**
 XXII, 1: 120
 XXII, 3–4: 285
- Historiae**
 I, 20: 178
 II, 84, 1: 71
 IV, 15, 3: 98
 IV, 22, 2: 112
 IV, 36, 2: 102
 IV, 38: 213, 217
- Thucydides**
 IV, 118, 5: 154
- Valerius Maximus**
 III, 4, 4: 166
- Varro**
De lingua latina
 VI, 19: 205
Res rusticae
 I, 2, 6: 267
 I, 2, 14: 146
 I, 2, 22–3: 10
 I, 2, 23: 141, 169
 I, 16: 146
 I, 16, 1: 12
 I, 16, 3: 13
 I, 69, 1: 14
 II, *Praef.* 3: 5, 214
 II, 6, 5: 14
 III, 16, 11: 14
- Velleius Paterculus**
 I, 81, 2: 274
 II, 129, 3: 186
- Vergil**
Georgica
 I, 53–8: 6
 I, 228: 267–8

II, 6: 144

Vitruvius

VI, 5, 2: 10, 141

Legal

Digesta

III, 2: 167

III, 3, 4: 78

V, 3, 27, 1: 11

VII, 1, 13, 5: 11–12

VIII, 3, 6: 11

IX, 4, 19, 2: 29

XIII, 3, 4: 78

XIII, 4, 3: 73, 78, 184

XIV, 1: 32

XIV, 1, 1, 6: 18

XIV, 1, 1, 1–25: 28

XIV, 1, 3: 32

XIV, 2, 2, 2: 53

XIV, 2, 10: 74

XIV, 2, 10, 2: 274–5

XIV, 3, 1: 27

XIV, 3, 4: 18, 146

XIV, 3, 5, 2: 134

XIV, 3, 5, 2–3: 28

XIV, 3, 5, 12: 13

XIV, 3, 7: 27

XIV, 3, 16: 13

XIV, 4, 1–2: 53

XV, 1, 5, 4: 28

XVIII, 1, 8: 143

XVIII, 1, 39: 143

XVIII, 1, 71: 147

XVIII, 1, 77: 12

XVIII, 6, 1, 1: 143

XVIII, 6, 1, 4: 144–5

XVIII, 6, 2: 144, 147

XIX, 1, 21: 147

XIX, 1, 25: 144

XIX, 2, 15, 6: 270

XIX, 2, 31: 53

XXVI, 7, 7, 10: 73

XXVI, 7, 58: 30

XXVII, 4, 3, 1: 73

XXVII, 9, 3, 6: 11

XXX, 39, 1: 73

XXXIII, 7, 12, 1: 18, 146

XXXIII, 7, 25: 11

XXXV, 2, 63, 2: 78

XXXVII, 14, 18: 59

XXXVIII, 1, 19: 168

XXXVIII, 1, 45: 59

XXXIX, 4, 4, 1: 103, 259, 274

XXXIX, 4, 9, 8: 14

XL, 9, 10: 30

XLVI, 3, 35: 28

XLVII, 2, 21, 5: 146

XLIX, 16, 12, 1: 105

L, 5, 3: 31, 161, 197, 212, 219

L, 6, 6: 218

Epitome Ulpiani

III, 6: 212

Gaius

Institutes

I, 32c: 211–12

III, 149: 36

V, 71: 152

Paul

Sententiae

Leyden fr. 3: 134

Leyden fr. 7–11: 156–7

Codex Theodosianus

XIII, 8, 1: 105

Epigraphic*

CIL, II, 1054: 59

CIL, II, 1064 = *ILS*, 6919: 59, 251

CIL, II, 1195: 251

CIL, II, 1474: 60, 250

CIL, II, 1481: 59, 251

CIL, II, 1533: 251

CIL, II, 7, 544: 250

CIL, III, 8364: 252

CIL, III, I, 29: 223

CIL, IV, 138: 141

CIL, IV, 1679: 148

CIL, IV, 3948: 148

CIL, IV, 5605: 271

CIL, IV, 5610: 271

CIL, IV, 9373: 271

CIL, IV, 9480: 55, 250

CIL, VI, 1101 = *ILS*, 519: 147

CIL, VI, 1625 b = *ILS*, 1340: 55, 249, 253

CIL, VI, 1935 = *ILS*, 7489: 250

CIL, VI, 9546: 50

CIL, VI, 9653: 37

CIL, VI, 9659 = *ILS*, 7519: 132

CIL, VI, 9682 = *ILS*, 7277: 139, 147

CIL, VI, 13823: 56

CIL, VI, 13860: 56

CIL, VI, 20742: 252–3

CIL, VI, 29565: 251

CIL, VI, 29722 = *ILS*, 7490: 60

CIL, VI, 33887 = *ILS*, 7481: 64

CIL, VII, 22640, 65: 223

CIL, IX, 24 *add.*: 252

CIL, IX, 60: 32

CIL, IX, 2128: 41

CIL, X, 846 = *ILS*, 6367: 41

- | | |
|---|---|
| <i>CIL</i> , X, 1030 = <i>ILS</i> , 6373: 47 | <i>CIL</i> , XIII, 11179: 61 |
| <i>CIL</i> , X, 1613: 44 | <i>CIL</i> , XIV, 99 = <i>ILS</i> , 339: 139 |
| <i>CIL</i> , X, 1784: 45 | <i>CIL</i> , XIV, 409 = <i>ILS</i> , 6146: 147 |
| <i>CIL</i> , X, 1797: 45 | <i>CIL</i> , XIV, 2298 = <i>ILS</i> , 1949: 29 |
| <i>CIL</i> , X, 2389: 43 | <i>CIL</i> , XIV, 4142 = <i>ILS</i> , 6140: 60, 132 |
| <i>CIL</i> , X, 3014–16: 271 | <i>ILS</i> , 7484 = <i>CIL</i> , IX, 4680: 148 |
| <i>CIL</i> , X, 5936: 252 | <i>ILS</i> , 7485 = <i>CIL</i> , VI, 9993: 148 |
| <i>CIL</i> , XI, 6080, 21: 19 | <i>ILS</i> , 7486 = <i>CIL</i> , VI, 9676: 148 |
| <i>CIL</i> , XII, 4393 = <i>ILS</i> , 7259: 59, 61, 250 | <i>ILS</i> , 7487 = <i>CIL</i> , VI, 9674: 148 |
| <i>CIL</i> , XII, 4406: 250 | <i>AE</i> , 1928, 183: 104 |
| <i>CIL</i> , XII, 4426: 145 | <i>AE</i> , 1955, 21: 271 |
| <i>CIL</i> , XIII, 1911 = <i>ILS</i> , 7033: 61, 139 | <i>AE</i> , 1978, 635: 104 |
| <i>CIL</i> , XIII, 1954 = <i>ILS</i> , 7030: 139 | <i>AE</i> , 1995, 1141: 69 |
| <i>CIL</i> , XIII, 1966 = <i>ILS</i> , 7028: 139 | <i>AE</i> , 2001, 118: 249, 253 |
| <i>CIL</i> , XIII, 1972: 139 | <i>AE</i> , 2002, 715 et 716: 56 |
| <i>CIL</i> , XIII, 1996 = <i>ILS</i> , 7031: 139 | <i>Syll.</i> 1229: 69 |

* Except in the case of Pompeii, the index is limited to inscriptions on stone.

Geographical Index

- Aar (River) 86
Acmonia 19
Aden / *Eudaemon Arabia* 231, 233, 235
Adriatic (Sea) 58, 88, 138; region 86, 312;
side of Italy 19, 48, 120
Aegean Sea 113
Aeolian Islands 262
Aezani 74
Africa 6, 60, 70, 79, 90, 100, 116, 124, 139,
153, 167, 189, 213–16, 268, 295;
proconsularis 79, 82–3, 87–8, 105, 124, 167
Agrigentum 162–3, 167
Ai-Khanoum 234
Aix-en-Provence 145–6
Alba 84
Alban Hills 196, 202, 207
Albegna (River) 80
Albenga (wreck) 112
Albinia 293, 303
Alexandria 8, 14, 31, 45, 48–50, 53, 67, 83–4,
105, 131, 139, 153, 186, 214, 217, 221, 239,
243, 265–75
Algeciras 263
Almería 52
Alpes-Maritimes 86
Alps 69, 109
America 74, 233, 236
Ametlla de Mar (wreck), *see* Bon Capo
Amiterno 227
Ampurdán 116
Ampurias, *see* *Emporiae*
Amsterdam 89, 95
Anatolia 274
Andhra-Pradesh 244
Aniene (River) 202
Antioch 89, 272
Apani 14
Apennines 82, 202
Apulia 14, 116, 123, 259, 263, 305, 313
Aquilaia 61–3, 83, 86–7, 88
Aquincum / Budapest 100, 112
Aquitania 101, 110, 115, 123
Arabia 6, 43, 46, 221, 229, 230, 233, 235, 236,
238–9
Arezzo 107, 108, 110, 299
Arikamedu 48, 101, 220, 237, 244, 245
Arles 81
Arles IV (wreck) 80
Aromata (Cape Guardafui) 237
Arva 59, 251
Asia 7, 45, 49, 50, 69
Asia Minor 19, 89, 237, 309
Aspendos 105
Astigi / *Écija* 31, 54, 56, 59, 61, 249–51,
252, 253
Astorga 85
Astura / Torre Astura 19, 305
Aterno (River) 227
Athens 3, 16, 17, 31, 75, 272, 275
Atlantic 258
Attica 115
Aude 303
Augsburg 20, 81
Augst 68, 86, 258, 311
Avenches 69
Axati 59
Babylon 6
Bactriane 234–5
Baetica 15, 19–20, 26, 31, 33, 51–61, 63,
70, 79, 81, 82–7, 95, 100, 105, 110, 114,
116, 120, 121–2, 123–4, 126, 127, 148, 195,
197, 249–54, 255–64, 269–73, 275, 305, 313
Baiae 216
Bakarè 244
Balearic Islands 80, 153, 278
Baltic Sea 74, 89
Barbarikè 244
Barcelona 58, 269
Barygaza 220, 221, 234, 244
Baschi 202
Bayonne 64
Bearsden 102
Belo 263
Bengal (Bay of) 49, 101
Berenice 42, 44, 221, 228, 247
Besançon 68, 280, 290
Bibracte 16, 259, 280, 290, 292, 293
Black Sea 120
Blavet (River) 289
Bon (Cape) 90
Bon Capo / Ametlla de Mar (wreck) 278
Bonifacio (Strait of) 263
Bonn 112
Bordeaux 26, 64, 94, 286
Boulogne 68
Britain / Britannia 7, 60, 67, 84, 85, 95, 100,
115, 257, 311

- Brittany 25, 279, 289, 303
 Brundisium 14, 32, 116, 259, 261, 305
 Budinatham 241
 Bu Njem 100
 Burgundy 27, 94

 Cadiz, *see* Gades
 Caieta 16, 207, 209
 Cala Culip 153
 Cala del Diavolo (wreck) 278
 Cala Rossa (wreck) 278
 Calabria 44, 259, 305, 311, 313
 Cales 108, 311
 Cambay (Gulf of) 220, 233–4, 236–7
Cambodunum / *Kempton* 86
 Campania 46, 56, 80, 82, 116, 122, 219, 266–7,
 270–2, 274, 279, 293, 299, 303–4, 311,
 313, 316
 Cannae 166
 Cap Negret (wreck) 263
 Capua 46, 163, 167, 274
 Caria 269, 271–2
 Carmania 237
Carnuntum 112
 Carthage 3–4, 47, 83, 113, 116, 164, 171–3,
 223, 225–7, 278, 303, 311
 Cartagena 57, 85, 121, 278
Castrum Novum 19
 Castellar de Pontos 278
 Catalonia 85, 90, 115, 145, 153, 278
 Cauvery (River) 242
 Cavalière (wreck) 153
 Caecina 83
 Cecina (River) 316
Centumcellae 209
 Ceramos 269
 Cesano 84
 Caesarea in Cappadocia 90
 Ceylon 43
 Chalon-sur-Saône 289
 Chandravalli 244–5
 Channel, English 67
 Channel Islands 115
 Chartres 115
 Châteaumeillant 288
 Chiani, *see* *Clanis*
 Chieti 47, 226
 Chiáscio, *see* *Teneas*
 China 43, 238
 Chios 65
 Chiusi, *see* *Clusium*
 Chur 86
 Cirta 20
 Città di Castello, *see* *Tifernum Tiberinum*
Clanis / *Chiani* (River) 203–4
 Clémency 282

 Clermont-Ferrand 283
Clusium / *Chiusi* 203, 267
 Coimbatore 241–2, 244
 Colinjsplaat 67–8
 Cologne 68, 104, 112–13
 Comacchio (wreck) 121
 Comorin (Cape) 233–5
Compasi 42
 Constance (Lake) 86
Coptos 42, 44, 48, 50, 221, 223, 225, 227
 Córdoba 83, 250
 Corent 283–5
 Corinth 113, 272, 311
 Coromandel (coast) 242, 244
 Corsica 153, 278
 Cortone 84
 Cos 108, 304
Cosa 17, 84, 303, 306, 310, 316
Cosanus ager 292–3, 304, 306
 Crete 96, 104–5, 196, 273–5
 Creus (Cap de) 153
 Cumae 57, 70
 Cyprus 116, 154, 274, 311
 Cyrene 115

 Dangstetten 86
 Danube (River) 62, 86, 100–1, 111–12, 120,
 122, 308, 312
 Danubian (Provinces) 88
 Daunia 14
 Deccan 101, 231, 233, 235, 237, 244
 Delos 14, 46, 121, 295
 Delphi 288
Dertona 84
 Dharapuram 242
 Diano Marina (wreck) 47, 221–3
 Didyma 20
 Domburg 67–8
 Doré (River) 289
 Dramont A (wreck) 16, 138
 Dugenta 305

 Ebro 85, 115
 Écija, *see* *Astigi*
 Egypt 6, 42, 46, 47–9, 50, 51, 55, 73, 83, 99,
 104, 116, 122–3, 177, 185, 186, 188–9, 192,
 195, 197, 214, 215, 216, 219, 221, 223, 225,
 228, 233, 235–8, 242–4, 267–9, 272,
 275, 309
 El Rinconcillo 263
 Elba (island of) 14–15, 83
 Elbe (River) 106
Emporiae / *Ampurias* 85, 88, 153, 278, 287
 England 91, 95, 236
 Entre-deux-Mers (canal d') 94
 Ephesus 36, 61, 69

- Érythraean Sea 237, 239, 246
 Ethiopia 268
 Etruria 14, 82, 108, 203–4, 214–15, 286, 311,
 313–16; northern 83–4, 305, 310, 313, 316;
 central 303–4, 313; southern 292, 304–5
 Euboea 65
 Europe 9, 71, 74, 89, 104, 201; western 5;
 northern 4, 89
 Falernum / *Falernus ager* 108, 141–2,
 304–6, 311
 Fara Sabina 202
 Fayum 78
Ferentinum 84
 Fesques 286
 Flanders 236
 Florence 311
 Foce Verde (wreck) 19
 Formiae 293, 304
 Fortunate (Islands) 237
 Fos (wreck) 52; Gulf of 52, 55, 142
 Fréjus 16
 Fucine (Lake) 208
 Fundi 304
 Gades / Cadiz 26, 31, 83, 89, 111, 207,
 262–3, 264
 Garigliano, see *Liris*
 Garonne (River) 94
 Gaul / Gallia 7, 16–17, 26, 52, 60, 63, 68, 69,
 70, 80, 84–5, 88, 106, 110, 113, 120–3, 138,
 153, 184, 263, 274, 277–95, 298, 299–301,
 302–4, 306, 307–9, 312–13, 314;
 Celtica 107, 109; Narbonensis 82, 83,
 85–6, 88, 110, 124, 149, 271, 313;
 Lugdunensis 86; Belgica 86, 286;
 Cisalpine 82, 84; northern 110–11, 303;
 western 113, 288; central 95, 115, 259, 289,
 303; south-west 123, 285, 313–14;
 southern 70, 82, 95, 101, 153, 278, 287, 300,
 303, 314
 Gedrosia 229, 232
 Genoa 66, 88, 133, 269
 Geneva 99, 259
 Genil (River) 54, 249
 Germania 58, 68, 84–6, 95, 100, 104, 106,
 110–11, 113, 122, 255, 257–9, 264, 293, 314
 Giancola 14
 Girona 85
 Grado (wreck) 83, 87–8
 Grand Congloué 1 (wreck) 152–4
 Grand Congloué 2 (wreck) 17, 146
 Grand Congloué 3 (wreck) 263
 Grand Ribaud (wreck) 220
 Great-Saint-Bernard (Pass) 69
Gravisca 305
 Greenland 117
 Guardafui (Cape) 236–7
 Gujarat 220, 234, 244
 Halaesa 163, 167
 Haltern 102, 104, 108
 Hammamat (Wadi) 47–8, 223–8, 242
 Hanse (The) 133
 Haute-Garonne 105
 Helenenberg 61
 Heraclea 167
 Herculeaneum 148
Hierapolis 61, 69
Hispalis 31, 83, 251
 Hispaniola 236
 Holland 89
 Hyères 149
 Ibiza 80; wreck 142, 263
 Igel 62–3, 65
Ilerda / *Lleida* 85, 278
 Illyricum 122
 India 6–8, 32, 43, 46–51, 185–6, 192, 220–1,
 229–47, 268
 Indian Ocean 101, 232–4, 236–7
 Indikè 235
 Indus 231–2, 234–5, 237
 Ischia 277–8
 Isère (River) 85
 Isola delle Femmine (wreck) 19
 Istanbul 5
 Istria 82, 86–9, 100, 123, 305
 Itri 304
 Jerusalem 49, 51
 Kanè 231
 Karur 244–5
 Kästrich 113
 Kempton, see *Cambodunum*
 Kent 68
 Kerala 244
 Knossos 274
 Koneripatty 242
 Kutch (Gulf of) 234
 Kyrenia (wreck) 154
 La Chrétienne C (wreck) 154
 La Chrétienne M (wreck) 80
 Laetania 196, 313–14
 La Garde (Saint-Michel) 85
 La Graufesenque 101, 110, 300, 314
 Languedoc 94–5, 287
 Laodicea 213, 221
 La Parrina 293
 L'Aquila 220, 226–7, 230, 244

- La Rochelle 64
 Latium 19, 202, 207, 214–15, 272, 293, 303,
 305, 311, 314–16
 La Tolfa Hills 209
 Leghorn 95–6
 Le Mans 115
 León 85
 Lepanto 71
Lepcis Magna 83, 123
Leptiminius 105
 Les Embiez (wreck) 311
 Le Titan (wreck) 263
 Levant 274, 278
 Levant Island (wreck) 263
 Lezoux 110
 Licenza 84
 Liguria 83–6, 87, 221
 Limoges 288
 Linaro (Capo) 209
 Lipari 116
Liris / Garigliano (River) 304; valley of 201
 Lleida, *see* *Ilerda*
 Loire (River) 94; valley of 115, 123
 London 5, 26–7, 91, 201
 Lucania 16
 Lusitania 73, 123
 Luxembourg 17
 Lymirikè 235–7
 Lyons / *Lugdunum* 7, 56, 58, 60, 106–11,
 116, 139, 240, 258–64, 281, 283, 289,
 300, 311, 314
 Mâcon 311
 Madeira 236
 Madrague de Giens (wreck) 294
 Madras 244
 Madrid 72
 Magdalensberg 61
 Magna Graecia 278
 Magnesia on the Meander 36
 Maharashtra 220
 Mal di Ventre (wreck) 121
 Malabar (coast) 43, 48, 235, 242
 Malea (Cape) 69, 274
 Mambalam 244
 Maremma 202
 Marseilles 25, 83, 143, 152–3, 215, 237, 263
 Marsi (land of the) 48, 203, 226–7, 242
 Masada 116
 Masirah (Island of) / *Sarapis* 236
 Massif Central 288
 Mathura 220, 226
 Mauritania Caesariensis 148
 Mainz 57–8, 79, 86, 112–13, 253, 259
 Mediterranean Sea 101, 106, 110, 117–20,
 153, 207, 209, 212, 236, 239, 243, 245, 258,
 261–2, 273, 275, 278–9, 308; western 5, 80,
 113, 117, 228, 237, 239, 313; eastern 45–6,
 50, 61, 66, 83, 109, 221, 269, 272
 Mediterranean (regions) 4–5, 16, 58, 79, 83,
 89–90, 101–2, 113–14, 220–1, 258, 267, 279,
 286, 292, 294, 300, 305
 Médoc 26–7
 Meloria (A) (wreck) 278
 Menih El-Her (Wadi) 42, 45–7, 221, 242
 Metz 21
 Meuse (River) 258
 Millau 300
 Milo 116
Minerva Scolacium 44, 61
 Minnagar 244
 Minturnae 16, 293, 311
 Misenum 64
 Molis d'Espigol 278
Mons Claudianus 91
Mons Lactarius 216
 Mont-Beuvray, *see* Bibracte
 Monte Argentario 293
 Monte-Cristo (Island) 153, 278
 Monte Massico 305
 Monte Sant'Angelo 215
 Montmaurin 105
 Morocco 16, 100
 Moselle (River) 62, 68, 258, 260; region 123
 Murecine 136, 184, 265
Muziris 48, 230, 242, 244
Myos Hormos 47–8, 50, 221, 223, 227–8,
 237, 242
 Nantes 94
 Naples 5, 113, 123, 125, 207, 216, 265, 277,
 300, 311
Nar, *see* Nera
 Narbonne / *Narbo* 31, 56–7, 59, 61, 88, 105,
 107, 110, 145, 153, 250–1, 287
 Narni 203, 316
 Nashik 244
 Neckar (River) 68
 Nera (River) / *Nar* 11, 26, 202–3
 Neumagen 65
 Neuss 106, 112, 262
 Nevers 289
 Nevasa 244
 Nicomedia 61
 Nile (River) 42, 91, 221, 223, 225, 242; Haut-
 Nil 236
 Nijmegen 61, 68, 106
Nomentum 263
 Noricum 61–2, 86, 88
 North Sea 74, 89
 Numantia 99
 Numidia 20

- Oberaden 108–9, 255, 259–60, 262, 264
 Océlis 230
 Olbia (Var) 149
 Oman (Gulf of) 233; Sea of 43
 Ombrone (River) 316
 Oplontis 142
 Orange (France) 86, 260
 Orbetello (Peninsula) 303
 Orissa 244
 Orleans 94, 289; canal 94
 Orte 203
 Orvieto 203
 Ostia 6, 60, 82, 105, 136, 139, 147, 148, 169,
 204–9, 216–19, 252, 261–2, 263, 267, 269,
 299, 300, 306–9, 311, 313, 314
 Otricoli 203, 316
 Ouvèze (River) 260
 Oxyrhynchus 140–1

 Padiyar 242
 Paglia (River) 203
 Paithan 234
 Palermo 19
 Palestine 268, 309
 Pannonia 61, 86, 101, 104
 Paris 5, 94, 95, 196, 201–2, 207
 Paropamisadae 232
 Pas-de-Calais 68
 Patale / Patala 230, 232, 234–5, 237
 Paule 279, 289, 303
 Pech-Maho 278, 288
 Paelignians (land of) 48
 Pelusium 267–8
 Pergamon 20, 113
 Perimula 235
 Persia 230, 237
 Persian Gulf 229
 Petra 49
 Pharsalus 47
Phoinikôn 42
 Phrygia 19, 69
 Phykous 115
 Picenum 19
 Piraeus 131–2
 Pisa 108, 305, 308, 316
 Pisidia 213, 260
 Planier 3 (wreck) 80
 Po (River) 172; basin of 73, 89, 108
 Pointe Lequin (wreck) 278
 Poitiers 17
 Pola 303
 Pompeii 15, 26, 30, 31, 41, 47, 52, 55, 63, 81,
 83, 84, 88, 141–2, 143, 145, 148, 250, 264,
 265, 271, 274–5, 299–300, 301, 309
 Ponnani (River) 242
 Pontos 278

Populonia 15, 316
 Porquerolles (Island) 153, 278
 Porto Torres, see *Turris Libisonis*
 Portugal 236
 Port-Vendres 52
 Port-Vendres II (wreck) 52–3, 57
 Puteoli 15, 29, 31, 41, 42–6, 48–51, 59, 61, 80,
 88, 138, 169–70, 184, 205, 207–9, 211,
 214–19, 261, 265, 266–7, 269, 270–1, 272–3,
 273, 275, 299
Praetutianus (ager) 19
 Prenestine Hills 202
 Procchio (wreck) 83
 Pselkis 99
 Punta Licosa 19
 Punta Scaletta (wreck) 80
 Pyrgi 16

 Quseir-el-Qadim 223, 225

 Ras Fartak 230
 Raurici (land of the) 68
 Ravenna 88
 Raetia 20, 81, 86, 88, 116
 Red Sea 42–4, 48–51, 221, 223, 225, 228,
 235, 242
 Rhine (River) 26, 58, 59, 68, 101, 106, 109–13,
 122, 258–62, 264
 Rhodes 154, 272, 274
 Rhône (River) 69, 80, 81, 85–6, 106, 107, 113,
 116, 122, 139, 258, 260, 262, 263; Valley
 of 57, 115, 123, 261, 263
 Riou 1 (wreck) 80
 Rouen 68, 207

 Sabina 82, 85, 196, 202, 204, 313
 Saguntum 196, 273
 Saint-Gence 288
 Saint-Romain-en-Gal 116, 259, 262, 311
 Sala 16
 Salamis (Cyprus) 311
 Salerno 265
 Sanguinaires A (wreck) 278
 Sanlucar de Barrameda 207
 Santa Maria Capua Vetere 274
 Santa Severa (wreck) 16
 Saône (River) 58, 60–1, 69, 107, 139, 258,
 260, 290–1
 Saraoste 234
Sarapis 236
 Sardinia 29, 60, 83, 116, 121, 139, 159, 160,
 263, 293
 Scheldt (River) 68
 Scotland 95, 115
 Seine (River) 202, 207
 Sequani (Lands of the) 68, 289

- Setia* 148
 Settefinestre 17, 84, 301, 304, 306, 312
 Seville 56, 207, 249, 253
 Sicily 4, 6, 29, 46, 83, 89, 121, 122, 153, 158, 159, 160, 161, 202, 207, 277, 278, 287, 309
 Side 105
 Sigerdis 234
 Sind 232, 234, 244
Sinuessa 304
Sipontum 24
Sisapo 97
 Socotra 237
 Sorrento 220
 South Shields 116
 Spain / Iberia 14, 20, 31, 46, 52, 78, 85, 87, 108, 236, 251, 272, 307, 309
 Sparta 4, 154
 Stabiae 81, 84, 216, 265
 Sud-Lavezzi 1 (wreck) 138
 Sud-Lavezzi 2 (wreck) 53
 Sud-Perduto 2 (wreck) 53, 263
 Syagros (Cape) 230
 Syria 45, 49–50, 221, 309

 Tamilnadu 220, 241
 Taprobane (Island), *see* Ceylon
 Tarraconensis 47, 58, 85, 88, 106, 109, 115, 116, 122, 123, 196, 278, 286, 313
 Tarragona 116, 278, 311
 Tarrega 278
 Tavoliere delle Puglie 14
 Taxila 232
Teneas (River) / Chiáscio 203
 Ter 244
 Terracina 162, 207, 208, 210, 215
 Terrasini B (wreck) 278
 Thebaid 237
 Tiber (River) 5, 11, 26, 196, 202–10, 214–16, 217, 218, 307, 313; valley of 70, 82, 201, 214, 308, 310, 312–13, 315–16
Tibur 311
 Tiburtine Hills 202
Tingi 271
 Tinia (River) 203

Tifernum Tiberinum / Città di Castello 182, 203
 Titelberg 17, 282
 Torre Astura, *see* *Astura*
 Toulon 85, 311
 Toulouse 17
 Tour d'Agnello (wreck) 278
 Transpadana 82, 88, 267
 Trier 61–3, 65, 68, 139
 Tripoli 170
 Tripolitania 79, 82–3, 87–8, 100, 123
 Tunisia 105, 307
Turris Libisonis / Porto Torres 83
 Tuscany 82, 153, 278, 315
 Tyrrhenian (Sea) 83; coast 84, 303–4, 310; side of Italy 82, 87, 120, 302, 304, 310, 316

 Umbria 82, 202, 203, 214, 310–11, 313, 315–16
 Uttar Pradesh 220
 Ujjain 220

 Vanayibadi 242
 Veii 84
 Veliocasses (Land of the) 68
 Velletri 84
 Venetia 61
 Ventotene (Island) 51
 Vesuvius 63, 81, 299, 308, 309–10
Vetera 112
 Vieille-Toulouse 287
 Vienne 86, 110, 116, 259, 261
Vindolanda 98, 100, 102, 104, 109, 116
 Volterra 305, 316
 Volturno (River) 305

 Waldgirmes 104

 Xanten 112

 Yassi Ada (wreck) 212
 York 68

 Zigerus 230

Subject Index

- agents 15, 27, 29, 31, 40, 44, 50, 57, 60, 62, 103, 113, 186, 221, 252, 253, 258, 271; *see* freedmen, slaves
- agriculture 3–4, 10–12, 14, 23, 28, 32–3, 35, 41, 66, 133–5, 141, 162, 165, 168, 187, 297–9, 316
- alum 116
- amphorae; African 79, 82–3, 105; August 21 86; from Baetica 116, 272, 275; from Brundisium 14, 116, 259, 261, 305; Dr. 1 16–18, 19, 28–9, 53, 75, 120–1, 142, 152–3, 263, 277, 280–3, 286, 288–90, 293, 295, 302, 304–6; Dr. 2–4 108, 116, 220, 274, 304–6, 311; Dr. 6B 86; Dr. 8 51; Dr. 9 51; Dr. 12 81; Dr. 20 15, 19–20, 51–3, 58, 83–7, 90, 95, 255, 259, 261; Dr. 21–22 122; Dr. 28 52; Gaulish 82, 308, 312–313; Gaulish 12 115; Greco-Italic 120–1, 152–3, 277–82, 286–92, 295, 302–6; Haltern 70 52, 86; from Istria 86–9, 100, 123, 305; Lamboglia 2 120–1, 164; late Dr. 2–4 116, 311; numbers of 79, 116, 154, 281, 286, 289–90, 302; Oberaden 83 255, 259–60, 262; Pompeii VII 52, 271; from the Tiber valley 82, 312–13, 315; from Tripolitania 79, 82–3, 87–8, 100, 123
- annona* (food supply organization) 31, 55, 60, 75, 94, 97, 104–5, 114, 116, 121–2, 138, 197, 202, 211–12, 217–19, 249, 253–7, 274–5
- barter 75, 99, 121, 181, 221, 239, 255; wine for slaves 19, 26, 120–2, 258, 290–2, 295–6
- borrowing *see* loans
- bricks 11, 26, 37, 62, 116, 203, 316
- buildings, *insulae* 11, 22, 37, 38, 133–4, 145, 169, 205; tenement blocks 39, 66–7
- calories 103, 188, 190, 192–3, 195
- canabae* 99, 111–13
- casks 58, 68, 95, 100, 101, 109, 146, 260, 261, 286, 302, 312
- ceramics 68, 79–81, 88, 92–3, 124, 125, 307; African 105, 123, 308, 314; Arretine 107–8, 299–301, 308, 314; and branches in Lyons 307, 314; from Campania 80, 125; as complementary cargo 80, 92, 105, 313; culinary 80; eastern sigillata 300–1; from southern Gaul 101, 110, 299–301, 314; Late Italian 123, 299–300; on the *limes* 101–2, 107–10; rouletted ware 244–5; traders in 68; *see also* pottery workshop
- competition 59, 90, 110, 123, 125–7, 297–300, 305, 310, 312–15
- complementary cargo 80, 262, 266–9, 274–6, 313
- corn *see* grain
- corruption 3, 104, 114
- decurions 21, 41, 43, 45, 59–61, 63, 68, 100, 102, 139, 167; decree of 47, 59
- delegated powers 13, 24; *see also* agents
- diffusor* 55, 59–60, 138, 249, 251–3, 287
- dolia* 14, 143–5, 149, 155; on board ships 47, 58, 95, 108–9, 221
- duumvir* 43–5, 50, 59–60, 63, 145
- dynasties of traders 43, 47–8, 53–7, 59, 60, 225–8, 242, 250–4
- earthquake of AD 62 41, 265, 310
- elasticity / elasticity of demand 92, 103
- emmer *see far*
- equestrian 29, 38, 39, 42, 50, 60, 63–4, 132, 151, 258, 275
- exercitor, actio exercitoria* 28–9, 32, 152, 160, 170
- euergetism 44–5, 61, 120–1, 139, 262, 283, 285, 302
- far* 266–8
- Finley 7, 72–7, 115, 127
- fleet 7, 31, 104, 196–7, 207, 208, 218–19, 230–2, 268; Alexandria 214, 217, 272; battle / war 19, 104; french merchant 7, 197; Rhine 104, 112; Tiber 205
- Folgehandel* 104, 114
- freedmen 27, 29–31, 57–62, 69–71, 126, 136, 243, 250–1, 254, 266, 275; acting as screen? 37, 137; agents 27, 30, 31, 35–6, 45–6, 62; of the Annii Plocami 43–4; 221–3; of the Barbii 61–2; of the Calpurnii 44–5, 49–50; C. Munatius Faustus 46–7; C. Novius Eunus 266–7; company with 35–6; Junian Latins 34–5, 211; of the D. Caecilii 52, 54–6, 59, 249–50, 252, 254; P. Olitius Apollonius 31, 138, 250–1;

- Quinctio 35–6; *see* loans to, Remmius Palaemon, Trimalchio
- garum see* salted fish
- grain 4, 5, 7, 11, 14, 36, 72, 74, 78, 89, 90, 92, 112, 133, 159, 194, 199, 200, 201, 213; from Apulia 14; from Africa 105, 216, 313; from Egypt 48, 73, 104–5, 131, 197–9, 215, 219, 265–9, 272, 275; a Giffen good 103, 122; supply of to the army 67, 99–100, 103, 117, 257, 258, 259; tax grain, supply of to Rome and consumption of in Rome 34, 67, 73, 95, 97, 113, 121, 122, 139, 151, 159, 160, 172, 188–95, 197–200, 202, 207, 209, 211–19; traders and transporters of 31, 47–8, 60, 67, 139, 223–5
- Hermapollon 7, 49, 53
- honey 14, 26, 36, 120, 295
- honour / dishonour 11–12, 21, 23, 39–41, 44, 46–7, 59–60, 64–6, 134, 137, 156, 168–9, 249, 262
- Hopkins ‘taxes and trade’ model 124–5, 257–9, 314
- horrea see* warehouse
- information 78, 94, 95, 106, 110, 114, 181, 231, 234–5, 238–9, 258–61, 314
- infrastructure 71, 92, 106, 114, 144, 205
- infringing the law 21, 25, 32, 67, 158–9, 162, 174, 247
- interlocked trade 114, 116–17, 122, 123, 265
- land transport 65, 90–2, 215; *see also* prices
- lead 44, 52–3, 117, 121, 138, 237, 287–8
- loans 27–8, 32, 38, 42, 136, 137, 167, 179–80, 182–4; fortune invested in 32, 33, 35–6, 37, 66–7, 134–6, 169, 174–5, 176, 177, 178–9, 180–1, 182–4, 186, 247; to freedmen 29, 33, 34–6, 43, 60, 136; shipping 33, 35–6, 53, 135, 137, 185–6, 269–70, 272; state borrowing 70–1; to traders 27, 29, 32, 39, 49, 134–5, 136, 137, 171, 184, 238, 247, 266, 269
- loss of nobility 21, 25
- magister navis* 31–2, 104
- mare clausum* 208–9, 215–18
- magistracy, public honours 39, 59, 60–4, 134, 187
- mercantilism 21, 71
- mint established at Lyons 106–9, 259–60
- moneylending *see* loans
- Monte Testaccio 15, 19, 31, 53–6, 61, 97, 138, 195, 197, 249–55
- Nebenhandel* 104, 114
- oil 5, 7, 36, 67, 78–9, 82, 101, 103, 105, 122, 139, 198, 220, 255, 257, 270, 297, 304; from Africa 79, 82–3, 87–8, 100, 105, 123, 124; from Apulia 14, 123, 259–63, 305, 313; from Baetica 20, 26, 31, 51–61, 70, 79, 82–7, 100, 105, 114–15, 123, 148, 195–6, 249–64, 270–3, 275, 305; consumption in Rome 7, 97, 105, 122, 197, 307; from Gallia Narbonensis 86; from Istria 62, 82, 86–8, 100, 123, 305; from Sabina 85, 195–6; from Tripolitania 79, 82–3, 87–8, 100, 123; on the *limes* and in supplies for the army 95, 97, 99, 100, 109, 113, 114, 249–64; *see also* amphorae, Monte Testaccio
- olives 86, 97, 100, 113; olive trees 12, 15, 83, 85, 88, 214, 263
- peculium* 27–31, 34–5, 190
- pepper 7–8, 43, 48, 116, 228, 237, 239
- population on the *limes* 111–13, 264; of Rome 5, 122, 123–5, 188–9, 190, 191, 192, 193, 196, 201, 207, 209, 214–16, 263, 309
- pottery workshops 37, 143, 145–6, 300
- prices, variations and setting 13, 14, 33, 72–9, 81–4, 88, 89, 92, 99, 103, 126, 143, 246, 266, 300; fixed or reduced 14, 73, 97–8, 99, 122–5, 126, 202, 238; high in Rome 6, 22, 124, 125; of imports from the East 7–8, 41, 238, 239, 243; of land 175–9, 181, 182–7; of oil 79, 82, 84; of transport 74, 90–2, 93, 94, 95, 97, 102, 105, 110, 120, 215, 275; of wine 14, 81–2, 99, 143, 228, 273–5
- publicans *see* tenders
- quaestus* 11, 22–3, 134, 150–2, 155–7, 161–5, 167–9, 171–2, 260
- redistribution ports 88, 115–16
- Remmius Palaemon 26, 143, 147
- return cargo 83, 89, 105, 116, 139, 299
- risk / security 3–4, 33–7, 49, 51, 53, 59, 93, 95, 97, 124, 135, 137, 143, 151, 166, 170, 177, 180, 182, 185–6, 194, 207–8, 217–18, 247
- Roll 76–7
- Rostovtzeff 7, 24, 62, 73, 297–300
- salted fish, *garum* 63, 83, 88, 92, 97, 100, 105, 109, 113, 120, 122, 123, 197, 220, 295, 307; from Baetica 31, 51–3, 57, 81, 95, 108, 110, 122, 258, 263, 270, 271, 272, 273; from Cumae 57, 70; from Gallia Narbonensis 110; off-loading at Lyons 94, 109
- security *see* risk
- senators, fortunes of 8, 32–3, 38–9, 66–7, 123, 175–7, 186–7, 246–7; camouflage? 23–6;

senators, fortunes of (*cont.*)

engaging in trade? 16–27, 35–6, 166–7;
financing of trade by 32–3, 35–7, 137,
186–7, 246–7; prohibition of any
quaestus 156, 162–73; prohibition of
tax-farming 151, 157, 159–60, 172;
prohibition on shipowning by 20, 23–6,
66, 134–5, 150–62, 171

ship operators 20–1, 23–4, 61, 66, 132, 138,
152, 155, 158–9, 161, 166, 169, 171–2, 199,
218, 250–1, 255, 274–5

shipowning / shipowners 16, 25, 26,
28–9, 31, 32, 61, 66, 73–4, 94, 132–4,
138–9, 151–2, 157, 159, 161, 221–3, 250

slaves; agent 27–32, 37, 40, 43–4, 46, 50, 67,
136, 141, 242–3, 269–72; daily necessity 7,
120, 296; exploitation of gangs of 22, 40,
66–7; from Gaul 26, 290–2, 295; grain /
wine ration of 190, 192, 196, 199;
importation of 7, 121, 123, 295–6; local
breeding of 121, 295–6; *negotiator* 27, 58;
officinarius 58; traders in 19, 25, 68–9, 127,
295; *see also* barter, *peculium*, delegated
powers

tax-farmers *see* tenders

tenders, tendering 38, 40, 43, 44, 64, 66, 67,
123, 159–61, 165, 202, 258

tonnage 9, 48, 91, 94, 150, 152–5, 160,
173, 197, 205, 207, 211–13, 215,
218–19, 269

transaction costs 74, 81, 93–5, 102, 106

Trimalchio 31, 33, 38, 41, 47, 64, 131–2, 134,
136–7, 253

usury 22, 34, 66, 183–5, 187

vici 99, 111–12

'villa system' 298–9, 304

warehouse (*horreum*) 55, 91, 116–17, 142,
145, 149, 194–5, 205, 207–9, 215, 217, 235,
258, 261, 266, 268, 271

wheat *see* grain

wine; from the Adriatic 86, 88, 120, 147; from
Apulia 14, 116; from Baetica 52, 70; from
Burgundy 27, 94; from Campania 82, 120,
293, 303, 304, 309–10; consumption of in
independent Gaul 120, 281–6, 294, 302–3;
consumption of in Rome 7, 75, 82, 120,
122, 196, 306–10; consumption of in the
armies 95, 97, 99–101, 120, 257, 261; from
Crete 104, 273–6; Domitian's edict 81–2,
298, 299; from Etruria 14, 82, 292, 303, 304,
306, 313, 316; exported to India 48, 101,
220–1, 244; extent of the market 81–2, 92,
103, 303; Falernian 108, 148, 273, 293, 304,
311; from *Hispania Tarraconensis* 47–8,
58, 109, 115, 122, 123, 196, 272, 307, 309,
313–14; from Languedoc in the 18th
century 94–5; from Médoc 27;
merchants 19, 26, 47–8, 57, 60, 63, 68, 70,
82, 109, 110, 138, 139, 140–9, 305; from
Normandy 115; off-loading of in
Lyons 58, 108–9; *posca* 100; sold as
standing crop 14, 143–5, 147; sold
retail 11, 15, 27, 140–2, 147–9; from
southern Gaul 52, 82, 83, 105, 124, 307,
313; from the Tiber valley 82, 310, 312, 313,
315–16; trade in under the
Republic 117–21, 138, 153–7, 160–2,
277–96, 302–6; from the Vesuvius
region 81–2, 309–10; and vineyards
belonging to Lentulus 16; belonging to
Peticius 47–8, 221–8, 244; belonging to
Pliny the Younger 14, 82, 203; belonging to
Sestius 17, 146, 282; belonging to
Sornatius 19; *see also* amphorae, barter,
prices